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PRINCIPLES AND METHODS
IN COMMERCIAL EDUCATION



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TORONTO

PRINCIPLES AND METHODS IN COMMERCIAL EDUCATION

A TEXT-BOOK FOR TEACHERS, STUDENTS
AND BUSINESS MEN

BY

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Norwood Press
J. S. Cushing Co. — Berwick & Smith Co.
Norwood, Mass., U.S.A.

PREFACE

THE occasion of the publication of a pioneer work on the subject of Principles and Methods in Commercial Education makes it appropriate to review the progress in the field of education which has made this work necessary. The rapid development of commercial education within the past fifteen years, which has been marked by the establishment of secondary and higher schools of commerce, has not only enlarged the concept of business education beyond the clerical aim of the old-time business college, but has also given rise to the need for properly trained teachers in commercial schools. The demand is for teachers who, besides being masters of their subject, are acquainted with the principles and methods of their specialty and have the ability to apply these principles in the class-room. While facilities for training persons for the higher branches of business have been established by universities, and while the literature dealing with this phase is considerable, it is strange that practically nothing has been done thus far to give prospective teachers the pedagogical foundation without which the mastery of the subject alone is inadequate to fit them for the highest attainment in their profession. The universities have sadly neglected the opportunity to offer normal training to commercial teachers, and the lack of literature on methodology is a distinct reflection of this neglect.

Within the past few years the demand for the close correlation of theory and practice in commercial education has given rise to experiments intended to bring the work of the

school in close relation to the business community. Accordingly, in several localities coöperative and continuation plans of apprenticeship have been established, the purpose of which is either to give students laboratory work as apprentices while they are studying, or else to give apprentices who are at work the theoretical educational foundation necessary to lead them to advancement in their vocation. The working out of this plan of coöperation necessitates an understanding on the part of the school authorities of the needs of business and, on the other hand, a familiarity by the business man with the aim of the work of the school. If the commercial world is to benefit by the specialized training given in the school, the business man must become better acquainted with the aim, the value, and the methods employed in a business education.

This work, then, is intended to give the teacher in the commercial school the broad vocational outlook upon his subject, to acquaint him with the pedagogical principles underlying it, and to discuss the special methods in the different subjects included in the curriculum. To the business man the book is intended to convey a knowledge of the value and content of a business education, to give him a sympathetic view of the work of the school, and a better understanding of the needs of it, so as to enable him to coöperate with it in a direction which will be of benefit both to the school and to the community at large.

While several contributions have been made to the literature dealing with the content and history of commercial education, notably by President Cheesman A. Herrick and by President Edmund J. James, there has been a strange neglect of the pedagogy of the subject; and this in a field in which the lack of trained teachers is probably greater than in any other. The authors, therefore, feel that the publication of this pioneer work on *Principles and Methods in Commercial*

Education meets a timely want, and that it will help to raise the standard of the commercial teacher and give the business man an appreciation of the value of a theoretical education in correlation with practical work.

The authors have confined themselves largely to the consideration of commercial education in secondary schools, because in these pedagogic training is most urgent. As the higher schools are of a professional or special character, and as the students in these schools are older, the lack of good method is not so disastrous as in the case of younger pupils. Outline lessons and syllabi have been given in several instances as illustrative of the application of the principles discussed, and particularly in subjects in which the text-book is not a sufficient guide for the proper sequence of topics or for the method of the recitation.

The authors beg to acknowledge their indebtedness to Dr. John L. Tildsley, Principal of the New York High School of Commerce, for permission to use his syllabi in Local Industries, Municipal Activities, and Economics. As far as we know, Dr. Tildsley was the first teacher to develop a practical syllabus in the former two subjects, and the first one to apply the principle that the study of commercial geography should begin with the industries of the immediate locality, and that the study of civics should be made practical by including not only the political, but the economic activities of the immediate environment of the pupil. These syllabi were developed by Dr. Tildsley while he was chairman of the Department of Economics of the school, with some modifications by the teachers of his department. On the practical value of algebra in commercial arithmetic we desire to make recognition of the work of Mr. W. S. Schlauch, of the High School of Commerce, whose book on Commercial Algebra is in preparation.

Finally, it is the hope of the authors that this work will aid university schools of pedagogy and normal schools to realize the importance of devoting more attention to the training of efficient teachers in the field of commercial education.

THE AUTHORS.

NEW YORK,
October 21, 1914.

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PRINCIPLES AND METHODS
IN COMMERCIAL EDUCATION

PRINCIPLES AND METHODS IN COMMERCIAL EDUCATION

PART ONE

PRINCIPLES OF COMMERCIAL EDUCATION

CHAPTER I

THE ESSENTIALS AND VALUE OF A BUSINESS EDUCATION

INTRODUCTION

THE consideration of the subject of education for business at once suggests an inquiry as to the why and the wherefore of such education. For it is a view still held by many that there is no necessity for vocational training for commercial life in school, and that the proper way to learn business is to do so by entering business and starting at the bottom.

They hold that a scholastic education beyond the elementary course unfits a man for participation in industrial life, and they fortify their assertions by pointing to examples of self-made men, — men of limited education or none at all.

An analysis of those examples will show that these self-made men have succeeded not because of their lack of scholarship, but because they made up for that lack by self-education in the school of experience, — a course which developed not only their practical qualities, but trained their power of

observation, their judgment, their imagination, and their reasoning powers. And though measured in terms of dollars and cents these men were successful, yet, owing to their deficient education, they still lack the capacity for the apprehension of those finer elements of life which constitute the spiritual inheritance of the race, and the appreciation of which makes life richer and more significant.

However, confining our attention to the success which these men have achieved in business without a scholastic education, we may ask why others cannot do the same. Some of the self-made men possessed that genius for business which was able to triumph against obstacles by obtaining a practical education by self-directed effort. Others of that class might have been more successful if their practical native talent had the benefit of educational stimulus and direction.

But at any rate, the education of the vast majority of men must be directed by the school. It is the one man in a generation who, like Pascal, can discover by his unaided effort and without suggestion from books, the theorems of Euclid. And even the progress of such a man is greatly accelerated by the direction of the master. The apprentice system in business is rapidly yielding to special educational preparation, just as the apprentice system in law and medicine has yielded to university training. So we may expect that the higher preparation for business will soon rise to the dignity of professional training.

After we have decided that education is not only a help, but also a necessity to the business man, we still have to answer the question what kind of education we shall give and what elements we shall include in it. To do this we must consider briefly some conceptions of the meaning of education, and try to deduce from these the essentials of a business education.

The aim of education is fundamentally a sociological one. It is to prepare the individual to take his place in the civilization in which he lives, and to participate in its activities. The relations of man to his environment are many-sided, including not only his relations to the world of nature about him, but to society at large, to the state, and to the church. Our systems of education aim to give the student the ability to adjust himself to every phase of his environment, and this is the meaning of Spencer's definition of education as the preparation for complete living.

Now society is so constituted that every member of it, after he has passed his formative period, takes up a certain phase of its activity, which constitutes his vocation. One of the important needs of the individual is therefore preparation to perform his vocational tasks efficiently, because they constitute the largest part of his work in life. This preparation is sometimes left to the individual himself to get it by chance, sometimes it is accomplished by placing him in his industrial environment when he is still unfamiliar with it, and helping him at first to master the difficulties as they come, until he is able to help himself. The latter is the apprentice system. But for the higher vocations, those which demand the exercise of the highest powers of the mind, experience has shown that preparation cannot be left to chance or to an apprentice system, but that it requires an extended period of special theoretical and practical education. The professions have long been in this class, and now the necessity for such special preparation for business has become more and more evident. Thus we get the rationale of the special school of commerce.

But now arises another question. At what stage shall specialization begin, to what degree shall it be carried, and to what extent shall it include general education? We realize

of course that specialization cannot be commenced before a general foundation has been laid. The elementary school course is a minimum, and ought to be such for all persons of whatever walk in life. For professional education a larger foundation than this is necessary. And so the secondary school course, and sometimes the college course, are necessary to lay the broad basis for general culture requisite for the success of the professional man.

Specialization for business ought to begin in the high school period, because commerce does not require technical proficiency of such large extent as the professions, and because the pursuit of general culture can conveniently go hand in hand with the study of technical commercial subjects, with decided benefit to the latter. For this reason, in considering the subject of the essentials of a business education, we do so on the presupposition that the student has an elementary education and that the study of business subjects is to be a part of the high school course. Higher and narrower specialization is in place only in the university school of commerce, when the student with the aid of his practical experience has decided in what particular field or business he will make his object of special endeavor to excel. This phase of commercial education we will only notice incidentally to the main object of this work, — the aims and methods of the commercial high school.

A few words will not be out of place in connection with the reason why general culture ought to go hand in hand with special commercial training. Life is many-sided, and business is only one side of it. The man who finds himself in place only in business is narrow and unappreciative of the larger and spiritual phases of life. When he is away from his office or retires from commercial activity, life becomes empty and without significance to him. In other words, he has failed

to learn how to enjoy his leisure. A rounded education gives the man a proper sense of proportion of the relative value of things, and impresses him with the relation of his special activity in life with that of society at large.

The elementary curriculum, even in its small way, opens the mind of the individual to a many-sided view of the world. The secondary school course makes this view more vivid and unified. And in the specialized commercial course it singles out certain parts of the picture for closer observation, while the rest of it acts as a background to bring these parts out in closer relief.

We shall now consider what the subjects of the business course ought to be, and how they can help to develop all the faculties of man.

CONTENT OF A BUSINESS EDUCATION

I. LANGUAGE

We know that business involves the social activities of man and his relation to other men. Such relation is expressed through language. It becomes at once evident that the mastery of the vehicle of expression becomes the most important accomplishment of the business man, and, in fact, the highest possession of all men. The requirements of clearness, accuracy, and force are essential in business language, and the school properly provides an important place in the curriculum for it.

In view of the fact that commercial relations are conducted on such a large scale and, to a great extent, at a distance, language becomes particularly important as a written instrument. Among the expressions of language which the student must learn to make use of are letters and telegrams, abstracts

and condensations, reports, and advertisements. There are also those technical forms which are used in mercantile procedure, and which, because they facilitate the conduct of business, have been adopted universally. Form, arrangement, and technical expressions are of considerable importance, as well as content. Acquaintance with model forms is therefore prerequisite to the production of good forms.

The question whether the knowledge of a foreign language is an essential of the education of a business man is not always easy to answer. It depends upon local conditions and upon the length of time that is devoted to its study. If the curriculum does not allow three years' work in the language, it had better not be taken up at all. It is well to provide in the course for an alternative between commercial German and commercial Spanish. If the student contemplates entering a commercial house which is engaged in foreign trade, the utility of the study will at once be apparent. And even if he has no such present intention, he will be possessed of an additional qualification which will enhance his chances of employment in a branch of business, that contributes so largely to the total volume of commerce.

Besides, the study of a foreign language is of general utility in thus giving us a better understanding of the structure of our own.

II. MATHEMATICS

(a) **Commercial Arithmetic.** — The classification of commercial arithmetic under mathematics is only a matter of convenience. Mathematics is the science of quantity, and arithmetic is one of the subdivisions of it. But business arithmetic is studied primarily not for the attainment of scientific principles and method, but for its strictly utilitarian value.

All business deals with wealth,— its production, exchange, and distribution. The art of measuring such wealth is therefore of prime importance for the prosecution of all enterprise. It is an essential part of all business education to impart a knowledge of how to measure value under the various conditions in which it is found, and to give the ability to do this accurately and quickly. The intelligent solution of practical business problems is also very valuable in reënforcing the student's knowledge of business processes. Thus, for example, the problems in bank discount will throw light upon banking procedure, and the problems in commission will help to explain the relation between principal and agent. Not that arithmetic is the main vehicle by which an understanding of business processes is brought about, but it furnishes very striking illustrations of the value of correlating arithmetic with actual business practice, and *vice versa*.

(b) **Algebra.** — This important branch is the foundation of mathematical reasoning, because it furnishes the language which higher mathematics must make use of as its vehicle of expression. From a scientific point of view arithmetic is only a particular form of algebra. Now the justification for including the subject in the commercial curriculum lies in more than its value as a means of mental training. It has a distinct utilitarian value. Algebra furnishes a beautiful and concise method of expressing symbolically a quantitative process in a formula which comprehends all possible particular manifestations of that process. The use of formulas is an important aid to the understanding of accounting, of chemistry, and of physics. And besides, algebra furnishes such easy and clear methods of solving practical problems that are difficult or impossible of solution by arithmetic, that on the whole we are not only justified in including it in the cur-

riculum, but impelled to do so by the strongest practical arguments.

(c) **Plane Geometry.** — It is with some misgiving that we include geometry in the course; for it has practically no utilitarian value for the business man. If it were a question between geometry and a foreign language, we would certainly prefer the latter. As it is, geometry is made elective with stenography.

Of course it is true that geometry teaches us the properties of space. But then it shows not only what they are, but why they must necessarily be so. The extensive use of deductive reasoning is valuable as training in logical thinking. This is the main justification for making geometry a part of the curriculum. As to the properties of space, we get these in the geometric formulas we employ in industrial arithmetic, although the strict scientific explanation of them is only obtained by the study of synthetic geometry. It may be added, also, that geometry is the subject *par excellence* in the secondary curriculum, which demands strict and concise definition, close deduction from premises, and clear scientific expression. The elimination of the subject might therefore prove an unreplaceable loss.

III. BOOKKEEPING AND ACCOUNTING

One of the greatest inventions of the human race has been the means of fixing facts and events after they have passed from our view. Writing performs this function. But the pioneers of commerce discovered a more concise and systematic method of preserving a record of business than the narrative form. Thus bookkeeping originated, and while its fundamental basis has remained the same, the science of accounts and the complex requirements of modern

commerce have devised improvements in comprehensiveness and detail.

The study of bookkeeping performs the important function of teaching the student how to keep that systematic record of the business, which is so essential to its success. And even if his future work should consist in managing instead of recording business, the study will give him the ability to judge whether the work of his bookkeeper is being performed efficiently and honestly. The two things he should be able to find out about, — and they are the two aims of bookkeeping, — are, (1) How does the business stand? and (2) What progress has it made since the last period of inspection?

The ordinary routine bookkeeper perhaps does not realize the great possibilities of his work. It is the accountant who has opened the eyes of the business world to the possibilities of a set of accounts in telling the story of success or failure, and in suggesting improvements and economies.

This stimulation of the imagination and awakening of the reason by means of the subject make the elementary study of the science of accounting a necessity even in a secondary school. The relation between the bookkeeper and the accountant is the same as that between the mechanic and the engineer. The former does the task allotted to him, and generally does it well, but his activities have to be directed. He moves in the same groove, and there is no originality in him. The accountant, on the other hand, corresponds to the engineer, — the mind that plans and directs.

We want our bookkeepers to have some of that engineering spirit, — that initiative which lifts them above the dull dead routine; just as we desire our mechanics to improve themselves by becoming acquainted with some of the theories of their craft.

Such theoretical study is not recommended because it will dispense with the accountant. On the contrary, it will render the work of the accountant more important and more productive to the business, by enabling him to devote his attention to the larger phases of business, because he will have an intelligent and efficient instrument in the bookkeeper to help carry out his instructions.

But the good bookkeeper is not prepared for his task by merely knowing arithmetic and bookkeeping. These are only the formal aspects of business. He must understand business itself, — methods of producing, of distributing, etc. In regarding bookkeeping, we may see the twofold mistake which our system of commercial education generally commits. It is apt to make a sharp distinction between the preparation for carrying on business and the preparation for recording business itself, and as it does not see its way clear how to prepare for the former, it has left this phase to the student himself to learn it in contact with practical business. The work of the ordinary business school is mainly a preparation for keeping a record of business.

Now the mistake in making this separation between the carrying on of business and the keeping of a record of business has resulted in the establishment of a caste system. On the one hand no bookkeeper can be more than a mere clerk unless he learns about the nature of business and the processes involved in it. On the other hand, in establishing a caste of clerks the system has lost sight of the importance of bookkeeping to the man who is going to carry on the business, even though he is not going to keep books himself.

No man can have a grasp of the business, — no man can keep a check on the work of his subordinates, unless he can inspect the work of his bookkeeper, understand what he is

doing, and interpret the progress of the business from such inspection. Such knowledge will also make him more appreciative of that phase of the business, and of the work of the accountant.

It is true that some distinction will be made in the education between the man who is preparing for business generally, and one who is preparing for accounting in particular. But this distinction will be in the direction of greater specialization by the latter.

IV. BUSINESS PRACTICE AND OFFICE ROUTINE

This course is a necessary introduction to the study of bookkeeping. It includes in the first place the understanding of the function of the technical business forms such as receipts, orders, bills, statements of account, checks, drafts, notes, etc., the use of which makes the conduct of business orderly, and the keeping track of original records easy. This understanding should also include the ability of the student to draw up these forms from data furnished him.

As in actual business he will have to draw these up for preservation as original records; it is important that he write them in a legible and neat hand. Training in penmanship is therefore provided for in the commercial course as a preliminary to this work.

The work in office routine ought to familiarize the student with such factors as the preparation of the letter for mailing, postal laws and regulations, the use of the copying press, and filing systems.

V. STENOGRAPHY AND TYPEWRITING

In the course of the conduct of business, correspondence plays an important part. A great deal of its success is de-

pendent upon the efficient, accurate, and neat manner in which the correspondence is conducted. The complexity of the volume of business transacted has made increasing demands upon the manager's time in connection with the disposal of the correspondence. Even with the assistance of clerks this part of the work would prove a great tax upon the time and energy of the head, were it not for the fact that by the various systems of shorthand the clerks are able to take down the words of the superior at about the speed of ordinary conversation. In modern business the stenographer has become indispensable, and in view of the great demand, training for stenography has become perhaps the most important object of the ordinary commercial school.

The question now arises, Is a knowledge of stenography essential to a business education? It is for the one who is going to become a stenographer and correspondent. For the person who does not intend to practise this branch, whose work will consist in conducting rather than recording business, the study of stenography will be of relatively little utility. We must of course consider that it gives a valuable training in language, and is of some value in training the powers of observation and judgment, in training the ear, and developing the power of concentration, but on the whole, these are only incidental to the main purpose of the study, — the acquirement of technical proficiency. Even after the accomplishment of the object, this proficiency can be retained only by continual practice. If the student is not going to keep up the practice in business, he will lose that proficiency, the chief element of which is speed, and the many hours which he has devoted to the subject will have been largely wasted. The mental growth and stimulus which he has obtained from the study may remain with him, it is

true, but it will be slight compensation for the time and energy spent on the study, as compared with the fruits to be obtained by devoting the same period and effort to another subject.

Now it may be pertinent to inquire why the stenographer should receive a general business education at all, instead of being taught his specialty alone, together with a few other subjects like English, that are closely connected with it. The reason is that commercial life is in need of intelligent high-grade stenographers who shall be more than writing machines. The busy man must rely upon his stenographer to take some of the burden of routine correspondence from his shoulders. The employee must be competent to compose a letter from the brief directions given to him by his busy employer. This he can do only if he is competent to take an intelligent interest in the work of the firm. And who knows but the stenographer's position may be a stepping stone to work of greater responsibility and opportunity, to which his previous good training in school will be a decided help?

What has been said about making stenography an elective, also applies to typewriting, which is, of course, purely a mechanical subject. It is an accomplishment indispensable to the stenographer. Its use in business has been a great boon in saving time, promoting order and neatness, and avoiding misunderstandings. Nevertheless, it belongs to the specialized business course, and not to the general course. But it must be admitted that there are grounds for the support of the contention that a knowledge of typewriting is of general utility, especially in view of the large use to which the typewriter is put in private work outside of business.

VI. SCIENCE

We have now considered that one aspect of business that deals with the office where commerce is planned and recorded. But after all, this is only one aspect, although an important one, of the world's industry, which deals with the production, exchange, and distribution of goods. This world of industry is a large one, and to be master of it in all its details is not even remotely within the capacity of any single mind. Each industry is specialized, and the attainment of skill in each is a matter of special education. But there is one point in which commerce appertains to them all: the products, in order to be of utility, must be distributed in accordance with certain economic needs — and those needs will in turn determine forms of production. Hence, to a large extent, the requirements of commerce will regulate all industry in the world. And therefore, while the acquirement of the technique of a trade or industry is obviously not within the scope of a school of commerce, the question of management, supervision of the industry to the most economic advantage, and the technique of distribution of its production will still be a most important aspect of the commercial curriculum. Necessarily some knowledge of the technique of the leading industries, even though very superficial, will be of decided advantage in considering commercial problems.

We therefore provide the student with the means of becoming acquainted with the materials of commerce and processes, both of nature and man, involved in their production. To understand the variety and diversification of industry in the interrelation of the factors involved in it, it is necessary to study it from some principle of unity. This is furnished by

the study of science. Now the economic needs of man are satisfied first by materials and functions in the organic world, and secondly by those of the inorganic world. The former include the animal and vegetable kingdom, a study of which is undertaken by biology; the latter, involving the study of matter and the changes taking place in it, lead to the study of chemistry and physics.

There are three sciences, then, which disclose to man the nature of the physical environment about him, and the means of utilizing it to his own advantage. These are biology, chemistry, and physics. In this order we will include them in the commercial curriculum. Each one of the sciences will be studied with special reference to those materials and functions which man has made use of for industrial and commercial purposes. But necessarily, before industrial application can be properly understood, the underlying principles upon which these depend must be mastered. A careful theoretic foundation will therefore have to be laid in each science, without which the student will lack principles of interpretation to guide him in studying the phenomena of the science, upon which the industrial arts depend.

We will briefly trace the commercial value of each one of the sciences enumerated, omitting for the present their disciplinary value.

(a) **Biology.** — Our study of biology reveals to us the sources from which man satisfies the three primary needs of man, — food, clothing, and shelter. The study of the food-supply is therefore a prominent part of the biologic curriculum, together with the study of the two great materials from which we secure our raiment, — cotton and wool.

Altogether we may say that the course of industrial biology ought to be practically a course in elementary scientific agri-

culture. The relation of the latter to commerce is growing of greater importance every day. The changes taking place in farming methods to-day are analogous to those which occurred over a century ago in the mechanical industries, when the introduction of machinery so changed methods of production as to effect an economic revolution. Scientific and commercial methods are similarly transforming the work of the farmer in making the land more productive and the distribution of the product more economical. With the establishment of the United States Department of Agriculture, the various state departments, and agricultural experiment stations, the introduction of coöperation in marketing the product, the growth of the large produce commission houses, a new era has come in agriculture. The latter has become a complex study, having as its constituents not only biology, but also chemistry and physics. The biologic element, which of course predominates, includes the study of commercial plants, their cultivation and harvesting, the diseases to which they are liable, and their preventives. The study of domestic animals, their products, and preparation for the market would be included in the course. The chemistry of agriculture which perhaps might be studied in the course on industrial chemistry, would include the study of the soil and its fertilization, — the problem of letting the food-supply keep pace with the increase of the population, and how chemistry is solving it. Of course the study of biology would include the subject of the cultivation of the other crops of commerce, which serve to provide clothing and other comforts, as well as food.

(b) **Chemistry.** — The course in industrial chemistry would follow that in biology. It would reveal to the student the changes which take place in the constitution of matter, and how man takes advantage of these changes for industrial pur-

poses. The chemistry of the soil was referred to before as one of the important topics, as of course is the chemistry of food, its constituents, its preservation, and adulteration. In the study of the metals our eyes are opened to a wide industrial field. Practically all of them are found in a state of impurity and have to be reduced so as to be made available for use of the arts. Then there is the chemistry of carbon, which discloses to our view the nature of the product, coal, which makes the wheels of industry go round. It also includes the study of illuminating gas. In the course we will also have petroleum and its by-products, in which the scientist is still finding greater treasures every day. The chemistry of the dyestuffs also has developed a great industry, especially in Germany. One of the reasons for the commercial supremacy to which Germany is fast attaining, is the fact that its industrial leaders appreciate the importance of the scientific man in helping to realize industrial possibilities. We find an illustration of this in the fact that great manufacturing firms find that it pays to employ men solely for the purpose of conducting research work.

If the study of chemistry by the American student will have no other result than a realization on his part of the close relation between theory and practice, between science and industry, the time spent on it will have been entirely worth while.

(c) **Physics.** — Physics, while not so important as chemistry to the commercial student, must nevertheless occupy a place in the curriculum, apart again from its disciplinary value. Steam and electricity have brought about the modern era of industry. The study of the means by which man harnesses the wild forces of nature, — the water wheel, the steam engine, and the application of electricity, — these are all of the utmost

value to the business man. It is hardly necessary to go into further details on this subject, as the importance of the study is too obvious.

VII. TECHNIQUE OF COMMERCE

The sciences which we have reviewed show us how man makes use of the materials and forces of nature in producing an ever increasing complexity of new forms. But there is another element which must enter into the study of these forms. What is the purpose of production? Is it to serve the needs of the producer alone or those of others as well? Obviously the latter, because the producer has only a need for a small part of his product, and with the surplus he may obtain in exchange the product which he needs of the industry of others. Thus commerce arises, together with the particular technique which it develops. And so we place as a separate subject in the curriculum the technique of commerce, — a study of those conditions and arrangements which facilitate the exchange or transfer of goods.

In this course we will consider the various forms of the organization of industry, — the single entrepreneur, the partnership, the corporation, the trust, the specialization of industry, and division of labor. The preparation for the market — the methods of packing and shipping — is next in the course, followed by a detailed study of transportation on land and water. Special methods of marketing in connection with certain industries ought to be taken up: for example, the elevator system and the produce commission house. Among other topics would be the technique of selling, — the wholesaler, the retailer, the mail order business, and methods of advertising and the principles of salesmanship.

Money and credit deserve special study because they are

the means which make modern commerce on a large scale possible. The various institutions of credit, — the bank, the clearing house, and the exchanges; the instruments of credit, — checks, bills of exchange, notes, bills of lading, and warehouse receipts: the study of the function of all of these ought to be included in the course. Among other aspects of the subject are the technique of international trade and the modern mercantile information system.

VIII. ECONOMICS

The objection may be interposed that many of the topics in the foregoing course ought to be taken up in the course on economics. We may discuss here the position that the latter should occupy in the curriculum. Economics is the philosophy of business. It gives us a unity of view of the world of industry and commerce by determining the proper sphere of each industrial activity in its relation to others, and establishes the true basis upon which growth and progress in business depend. It is primarily abstract, although its truths are applied to concrete facts. Therefore pedagogically it marks the conclusion of the business course, being given at a time when the student has a sufficient mass of data derived during the previous years of study, from which to generalize. Now it will take all the time of the teacher — if the subject is properly taught, with all the scope given to discussion by the student — to impress upon the mind of the latter the principles of the science and their applicability to the industrial world. Details of the application of economic principles in actual business ought to be taken up in a separate course, where they can be considered concretely. This is provided in the course on the technique of commerce. The study of money and

credit should be so arranged as to be concurrent with the work in economics.

The regular course in economics ought to be supplemented by a study of corporate and public finance. The latter can be more efficiently studied in this connection than in the work in civics.

IX. COMMERCIAL GEOGRAPHY

Another subject essential to education for commerce is commercial geography. This subject gives us a view of the influence of geographic conditions like climate, topography, and location upon the industries and commerce of a country. It also treats of the resources of the commercial countries of the globe, their trade relations with each other, their means of communication, and their trade opportunities and rivalries. The course will also include a review of the materials of commerce.

Naturally the study will be taken up with the commercial possibilities of the locality, the state, and the United States. The study of the countries of the globe will be principally with reference to their relation with our own. The commerce of both the United States and the locality will also be considered in connection with problems of its expansion, the study of competition we have to meet, and means of meeting it. We will consider the entire subject in detail in a later chapter.

X. HISTORY

The study of the geography and the technique of commerce bring closer to mind the influence of human institutions in changing the face of the environment. This influence has not made itself felt immediately, because it has itself been in the process of evolution. Man's mastery over his environment is

not a sudden outcrop. To understand it we must study the progress of this struggle as recorded in history. It is hopeless to attempt to understand the complex organization of the world into those institutions which contribute to its forms and stability, — society and the state, — without a record of their gradual development from simple forms.

History, then, is not only of supreme culture value in giving us a realization of the meaning of civilization by disclosing to us the sources and the development of our race-inheritance, but it is of great utilitarian value. It contains the laboratory in which social, political, and economic experiments on a large scale have been conducted in the past, and the successes and failures of these form most valuable object lessons for us.

The course in a commercial school ought to lay particular stress on the industrial and social phases of history, although the political phase and the history of culture ought to receive their due share of attention. It is a question whether the history of commerce ought to be studied apart from general history. In the high school course it is probably not advisable to do so. The principal reason why the separate study of the history of commerce has been favored by some teachers is that the ordinary historical text-book contains so much of the story of war and dynasty, — with some recognition, it is true, of political and constitutional history, — that the economic and social elements have generally been left to appendices. An attempt will be made in a succeeding chapter to show how the course in industrial history may be made the centre from which the survey of the entire subject may be taken. For the present we will just note one important fact that ought to be kept in the foreground: that is the emphasis upon the element of growth and development. The chronological method fails entirely to give the student a grasp

of this. We want to appeal to the student's imagination, not to his memory. Historical maps visualize the territorial growth of the country. Other means, such as charts, tables, historical exhibits, etc., ought to be employed to visualize its economic development.

XI. CIVICS

The study of history should culminate with the history of our own country, and the study of its government. Every person should have a clear knowledge of the nature and functions of the state, and the duty which he owes to it. This conception of civic duty was especially strong in ancient Greece and Rome, where the good citizen and the good man were used as synonymous terms.

In the commercial curriculum outlined in the next chapter, the study in civics is begun by a course in municipal activities or local government. We begin this way, because it is the most concrete way of giving the student an idea of civic duty. For it is the local government with which the individual comes in most immediate contact, and in relation to which he can discharge certain duties, even at a youthful age, before he has the right of franchise. The intelligent exercise of the latter by no means discharges the obligation of the citizen to the state. If it did, women would have no obligation. There are many duties, both positive and negative, which a person owes to the government under which he lives. A clear realization of these ought to be impressed in the school as a preparation for civic righteousness.

XII. COMMERCIAL LAW

Civics has shown us the forms and institutions which the state has adopted for the best interests of its citizens,

and pointed out the paths in which our duty to the state lies.

The state has provided a system of laws for the protection of life and property. It has also laid down, to a large extent, the laws governing the relations of men to each other. With the growth of modern commerce and industry these relations have become more and more complex; and it is not to be wondered at that a conflict of motives between individuals should arise, and that their interests should sometimes clash. The state of course provides the means of peaceably settling these quarrels. But, as Polonius says, "Beware of entrance to a quarrel, but being in, bear that the opposer may beware of thee." An acquaintance with law will enable a person so to safeguard his interests, as to avoid expensive litigation. And if he is forced into it, he will know that he is in an entrenched position and that the opposer will have to beware of him. Commercial law, then, is to be included in the curriculum not because its study will help the business man to dispense with the lawyer, but because it will help him to protect himself when legal advice is not readily at hand, or when the unlearned in law would not think legal precautions were at all necessary.

XIII. OTHER SUBJECTS

Literature, drawing, music, and physical training and hygiene are all essential parts of the curriculum, but most of them will be treated below in connection with the discussion of the disciplinary phases of the subjects of the course of study. We will discuss here only the subject of physical training and hygiene.

The Greeks appreciated much more than we do the importance of the training of the body. But their motive was mili-

tary, athletic, and æsthetic, while ours is hygienic. We want our students to train their bodies because in doing so they will preserve their health and strength. Commercial pursuits are generally of a character not calling upon the exercise of the muscle. They are a constant tax upon the brain and nerves. Unless the worker has opportunities for relaxation, he will find that the work is a strain on his nerves, — that it makes him irritable and nervous, and that both his health and his business suffer; the latter from his inability to give the full measure of his normal mental power to it.

Now physical exercise is the proper relaxation that such a man needs. His work in physical training and hygiene in school should result in giving him a love of sport and healthy exercise, and the ability to take care of his body so as to preserve his health. The prolongation of life and the prevention of disease have of course their economic side. Ill-health, which prevents a man from doing his share in society, is a drain upon the resources of the community. Anything which prolongs the efficient period of a man's activity is the source of so much increase of the wealth and prosperity of the world.

DISCIPLINARY PHASE OF BUSINESS EDUCATION

Having considered the subjects which will have to be included in the commercial curriculum because they are the windows through which the individual will have to look at the world in general and at the industrial field in particular, we now have to regard the particular effect which these studies are expected to produce on the individual who is engaged in them, — and on the qualities which they are expected to develop in him.

We mention this subject, in spite of the fact that in certain pedagogic circles the reference to the general or formal dis-

disciplinary value of any subject is extremely unpopular. There is a widespread belief to-day that the training obtained from any subject will be manifested only in relation to that subject, and will not be transferable to any other subject. But the truth of this in its extreme form is very doubtful. There are many who still believe in the general disciplinary value of a classical education. Granting that there is some truth still left in the doctrine of general mental discipline, we desire to show that there is just as much mental discipline to be obtained from the business course as from the general academic course. On the other hand, even if the doctrine of formal discipline should be rejected entirely, it still remains true that the development of power in a subject, rather than the imparting of a mass of information, should be the aim of the teacher. Education as training and development, rather than cramming and stuffing, should be his ideal. What phases of the mind the teacher is to train, and how the content of the curriculum will aid him, we shall now consider.

1. Intellectual Training. — The use of this term does not necessarily involve the idea of training for scholarship. It has reference to the idea of the development in school of powers which are psychologically referred to as intellectual, — the power of observation, the judgment, the imagination, and the reason.

We may at first wonder why training of the memory is not included in the list. This is because the training of the memory is not an end in itself, and if made so it is apt to cause arrested development of the higher faculties. We do not want the student to carry a burden of facts, because he is liable to do so at the expense of the reason and as an excuse for not thinking. For the larger facts of life when grasped by the reason are remembered without any effort, and the smaller

facts rationally connected with them can be deduced from them by the mind, — again without the effort of the memory. Other facts are remembered only to the extent to which we know where to find them, when we need them. Such are the facts in the almanacs, individual items in our account books, etc. It is sometimes a disadvantage to a man in business to have a memory for individual isolated facts, because he is liable to get into the habit of relying upon his memory instead of writing them down. In this way he will tend to become unsystematic in his business habits, — a condition which will seriously interfere with the progress of his business. It is needless to refer to the importance that a complete record of things is in business.

It must not be assumed from the above that we are trying to disparage the importance of the memory, but only when its use tends to a disuse of the higher powers of the mind. It is of very great value to a person to be able to grasp facts in their relation to other facts in a group, to remember them as parts of one system of experience. Facts of that sort are remembered because they have been thoroughly assimilated; and the vehicle of this assimilation have been the higher intellectual functions of observation and judgment. The training, then, of the other powers will indirectly help the memory and make the special training of the latter unnecessary.

(a) *Observation.* — The difference between ordinary perception and observation may be illustrated by the following examples from bookkeeping. The layman looks at a set of books and sees only names and figures. He only perceives. But the bookkeeper looks at the same, and with the aid of his imagination the entire combination of the business is revealed to him. He observes. Observation is, therefore, active

seeing, and involves the concentration of attention to the discernment of a novel element in what appears to be familiar, and a familiar element in what appears to be novel.

The keen eye for details, the power to note variations and difference where the untrained eye would assume sameness, — all this is of course a desideratum of the business man. Each vocation develops in the individual certain powers to discriminate, — powers that tend to become sharper as specialization proceeds. In training for the vocation of business we aim to develop the power of observation, so that the student will become quick and alert in seizing details which come under his eye, — details that otherwise would escape him. We accomplish this object by encouraging the habit and strengthening the power of attention. Lack of concentration is the primary cause of failure to observe. The poor observer's attention is scattered so that all the facts in his immediate surroundings appear in the same degree of intensity or lack of it. Now the good observer focuses his attention upon a particular part of the picture before him, and for the moment shuts out from his view the other parts of the picture, or rather, places them in the margin of his consciousness. This concentration enables the observer to discern the nature of the object before him, and assign it to its proper place in the general view of his experience.

This power of the mind which we have been discussing is also exercised, though not so frequently, in finding similarities between objects that are apparently dissimilar. The finding of resemblances is a very important aid to reasoning. Thus the student of economics who observes that a certain present situation resembles one in the past, has a basis for predicting, by analogy, the consequences of that first situation. While observation is primarily analytic, discerning

variety and distinction where perception only sees sameness, its activity must be supplemented by synthesis in order that the results of observation may be of practical value; that is, the fact observed must be related to the rest of experience in order that its larger meaning may be grasped.

The exercise of the power of observation in school is best stimulated by questions. To the keen mind every slight departure from routine suggests a question which arrests the observer's attention until it is answered. In school this question must usually be directed by the teacher, and the student's attention aroused to the observation of differences and similarities.

As to the school subjects which train the power of observation, we will note only a few that do so in a high degree. First, of course, come the inductive sciences, through which the student learns to observe the phenomena about him either in the form in which they appear naturally, or under conditions introduced by experiment.

Business practice and routine requires the guiding stimulus of observation to keep one from getting into a rut. The constant exercise of observation on the student's part is necessary to learn the forms and procedure in business, until they are no longer new, but a part of habit. At this stage there is danger that the mind will sink into a kind of lethargy, because it lacks the stimulus of an obstacle to be overcome, of a difficulty to be mastered. The exercise of attention and observation keeps the mind constantly on the alert for new situations and departures, amid the apparent sameness of routine.

In commercial geography there is a continual appeal to the mind to observe similarities and differences between facts, so that the latter should not remain in the mind in isolation,

but as parts of a connected and orderly experience. Take a table, for example, giving the values of the different exports and imports of the United States. As isolated facts these values mean very little, but in their relation to each other, they furnish data from which to draw inferences regarding the general state of commerce in the country. Charts and statistical curves aid the student to observe these relations in their totality.

Commercial law affords excellent examples in the use of observation. Each case always involves a salient point upon which the decision must depend, and which the student must disengage from its non-essential surroundings. Or sometimes a case will come up, which a superficial consideration will decide in accordance with certain principles, while a careful scrutiny will disclose a point which changes the entire aspect of the situation.

(b) *Judgment*. — What do we understand by the training of the judgment? Popularly we know what good judgment means, but if we were asked to give an explanation of it we would find difficulty. And yet a clear, thoughtful, psychological analysis of judgment will prove of great assistance in understanding that function and in appreciating the relation between education and practical life.

By judgment in the largest sense of the word we mean, to use technical phraseology, the ability to see the particular in the light of the universal; or more popularly, to understand how to apply rules to particular facts and situations. Let us analyze this further. We learn laws and rules not as ends in themselves but as means with which to interpret facts. The ability to interpret facts by means of the proper rules constitutes judgment.

This difficulty presents itself in the exercise of judgment.

When we see a particular situation to which we have to adjust ourselves, we are sometimes at a loss to know what rules of our past experience we shall draw upon in order to accomplish our purpose. The man of judgment sees the situation and immediately, as we say, "sizes it up," a very expressive term which means that he interprets it in accordance with his past experience, and in the light of it adjusts himself to that situation.

This ability some individuals possess in such a marked degree that we sometimes say it is born with them. Now while this power is at the basis of genius and talent, it is not entirely native, but acquired by constant practice. No amount of general knowledge is of any value to us unless it will help us to perform a better adjustment to the environment. It must not only help us, but we must know how to help ourselves with the aid of it. That is the reason why in the school, practice, example, and drill are such an essential part. By their means the student learns how to recognize facts, how to do things, how to apply principles; in short, how to use his judgment.

Sometimes no amount of such training will avail to give a man the proper judgment. He may be full of knowledge and yet a fool when it comes to doing things. We find examples of that kind in many professions: the teacher who knows a great deal of pedagogy but who cannot teach, the lawyer who is learned in the law but fails to advise his client correctly, the bookkeeper who knows the theory of accounts but who cannot feel the pulse of the business and make a proper analysis of its condition. The trouble with these men is that they lack judgment. Somewhere in the recess of their mind there is the proper remedy for the situation, but it is mingled with so many other remedies, that they do not know which

one will fit in the particular case before them. They either choose the wrong ones or remain inactive, and turn out to be failures in their profession, while the man of less learning may become a brilliant success.

What is the reason for the failure of the former? There are two causes: One that their education has been too theoretical and they have been given too little opportunity to apply what they know to practical conditions. The other reason is a temperamental one, — a lack of native ability; and for this there is unfortunately no remedy. A person who suffers from this lack has chosen a vocation for which he is not fitted, and no amount of training can supply this constitutional deficiency.

This should not make us jump to the conclusion that an elaborate education as a preparation for business is futile, as far as training for practical work is concerned. Of course it is understood that no amount of commercial education will dispense with the necessity of actual experience in business to produce an efficient business man, just as no amount of medical education will dispense with the necessity of clinical experience to make a good physician. But the man who has had the thorough grounding in school approaches the problems with a different mind from the one who has not had it. He recognizes situations not as isolated phenomena but as exemplifications of laws and economic forces operating. He can therefore grasp the situation in its large significance and in its general relation to the rest of his affairs.

To study in detail how the subjects of the commercial curriculum train the judgment is, quantitatively, a large task. Every subject requires the student to make concrete application of the principles he has studied, to particular cases, — and to that extent it exercises the judgment. The only reason

why, in spite of so much opportunity to exercise the judgment, many students who leave school are still deficient in the latter is that the situations which confront them in actual experience, are the results of complex forces working to produce them, and they can be faced successfully only with this many-sided view of their cause. In school, on the other hand, situations are presented, with many of the extraneous forces operating, eliminated for pedagogic reasons. And even when the problem is complex the student can handle it successfully because, in a way, the very subject he is studying suggests an explanation. When, on the other hand, the problem is taken out of its environment and the student loses his clue, its solution becomes much more difficult, and is analogous to what is found in real life. The power to judge in such cases is a complex of the judgment and the imagination.

Let us take a few examples of school subjects to show how they train the judgment. Bookkeeping, if properly taught, helps the student to apply general principles to keeping an account of business in such a way as to produce a systematic and economical record and one *best adapted to the requirements of the particular business*. The bookkeeper of judgment is certainly the one who can do this best. In school the constant practice of the student in keeping sets of books of different kinds of business, trains his judgment, because he has to apply the general principles to a variety of situations.

Arithmetic accomplishes the same purpose. In order to solve a problem, the student has to judge that it is only an exemplification of one or more fundamental arithmetical processes.

Commercial law is a subject in which there is the greatest scope for the training of this power. Every case at law requires for its solution certain fundamental principles of juris-

prudence. To apply the proper principle of law to a particular case is not always easy; and sometimes it is so difficult that even the trained experts — lawyers and judges — disagree. The good judge must not only know the law, but *he must know how to apply it*. His decision or *judgment* is the application of the law to the particular case. This is exactly what we have shown to be the meaning of judgment in general.

From this it will be evident that no amount of drill on what the law is can compare in importance with practice in the solution of numerous legal problems. Only in this manner, by the training of the student's judgment, will his study of commercial law be fruitful to him.

(c) *Reasoning*. — The student of elementary psychology finds it difficult to discriminate between reasoning on the one hand and some of the other intellectual powers like judgment, which we have discussed, and which seem to involve reasoning. He finds himself, then, in what he considers a hopeless circle. On the one hand, a chain of reasoning is a combination of judgments, on the other, each judgment is itself the result of reasoning. This difficulty can be explained away. Note that the mind is a unity, and all its so-called faculties are only manifestations of particular powers of it. Now it has been remarked that even the lowest manifestation of intelligence — perception — is the result of reasoning, — the conclusion of a syllogism. But the point is that the activity of the reason in perception is unconscious, while in the higher powers it is reflective. Each judgment is the result of an implied syllogism, but the premises of that syllogism do not stand out consciously in the mind. We may use an imperfect analogy and say that the judgment represents the sentence, while reasoning represents the paragraph or extended discourse.

In the exercise of reasoning, both inductive and deductive, the mind makes use of a series of combinations of judgments to complete its work of arriving at truth. Inductive reasoning gives us truths or general principles, which in turn the mind makes use of to arrive at larger truths. Deductive reasoning tests the validity of these truths by deriving the particular facts by deduction from them. To illustrate from one of our subjects: The laws of a nation are the crystallized experience of the people, extending back many generations. Their formulation is a process of induction. Given these laws, and we can define all the relations of men under the state by means of these. We do this by a process of deduction.

Mathematics, especially geometry, is frequently mentioned as the subject *par excellence* which furnishes training in deductive reasoning. This is because geometry begins with a series of most general axioms and definitions, and with the aid of these it deduces all the properties of space. But we fear that its disciplinary value is overrated when we compare it with the possibilities of commercial law when well taught, as a subject which furnishes training in deductive reasoning. The trouble with geometry is that, as it is a subject which deals with a formal aspect of the world, abstracted from its content, the student fails to see the relation between the problems of reasoning in geometry and those in real life.

In commercial law, on the other hand, there is as wide a scope for training in deductive reasoning as in mathematics, with the additional advantage that the subject deals with concrete facts. The situation presented is this: The student is as a rule not asked to discover by a process of induction what the law is. He is given the law, and asked to deduce from it applications to particular situations. By the use of numerous cases the student's ability to deduce the law in a

particular case from a general knowledge of the law, is continually tested and strengthened. The subject also gives abundant opportunity for the use of the Socratic method, as will be shown in the special chapter on methods in commercial law.

Economics is another subject in which deductive reasoning is employed. The student has discovered the economic laws. Given a certain state of facts, and he will be able to give their economic interpretations. But right here the student must be cautioned that the economic laws are largely the result of the combined experience of the present and past ages, and therefore inductive. Even when they are hypotheses, they have been tested so often by experience, that they may be not improperly said to be based on experience.

The sciences and all the subjects in which the student derives facts by his own observation furnish good training in inductive reasoning. The facts collected by the student's own observation are unified by being shown to be the workings of one and the same law. This is induction. But science also contains its deductive element. The laws derived by induction are made use of by being applied to explain new facts. And just as the inductive sciences have a deductive element, so the deductive sciences have their inductive side. Thus in commercial law, the application of the law to particular cases sometimes leads to difficulties and injustice, and the generalized expression of this experience is a new law, established either by decision or by statute.

Why do we call some sciences deductive and others inductive, if both methods are found in all of them? We do this in accordance with the method which predominates in the particular science.

(d) *Imagination*. — Another power spoken of as essential in

the training of the business man is the imagination. It may at first seem strange that the training of this function should be emphasized in connection with the education for a practical aim, as it is so frequently associated with the dreamer and unpractical man. But the imagination reënforced by judgment is perhaps the most valuable possession of business genius and talent. The man of imagination is the one who foresees business possibilities. His suggestive mind is struck with an idea, and he sees it in its realization, while others call it far-fetched and impracticable. Our great inventors have been men of imagination, and it is too familiar to cite illustrations of how many of them have been called dreamers when they first propounded ideas.

Now the imagination takes the man out of his accustomed routine. One man may be familiar with a certain course of action or line of business policy and he may pursue it along the well-beaten path. Another man's imagination sees new business opportunities in this line, new chances for trade enlargement, new methods of making an impression on the environment. His imagination gives him the clue to a new aim, his judgment tells him the best means to use to realize his aim.

It is the man of imagination in business who has practically created the branch of business known as advertising. And where would city and railroad development be without the imagination of the man who sees a land area in a particular location covered with trees and uninhabited, and pictures it as a busy industrial centre of the future; and puts his faith in practice by helping to make his picture a reality?

There is another sense, although not exactly a practical one, in which the training of the imagination is important, and which will be spoken of in connection with æsthetic

training. The man who lacks imagination will not be receptive to art and literature, and will therefore have shut to him one gateway of experience through which so many things enter that make life richer and more harmonious. The study of literature is one of the best means of developing the imagination, and it becomes of added importance because it forms the habit of reading, and therefore of extending one's means of self-education.

Now to consider briefly how some of the technical commercial subjects develop the imagination. Bookkeeping and accounting, with their matter-of-fact statements and columns of figures, are nevertheless a fruitful source for the man of imagination. What are those facts on the books but symbols which stand for the business and its progress? The imaginative person will at once construct in his mind an entire picture of the business, in its concrete workings, its progress, and its present status. This picture will at once suggest to him whether the business is healthy or whether there are symptoms of disease, — where there are leaks and where there are opportunities for further development. It is true he will proceed to test his theories and surmises by a close analysis. But the general impression, the synthesis which gives the cue to his analytic activity, is the result of his imagination. Practice in interpretations of facts as they are presented in sets of books is therefore a most valuable adjunct to the training of the bookkeeper.

Commercial geography is the subject in which there is the greatest scope for the imagination. It is when the imagination is lacking that the study becomes a dead recital of facts and figures. The imagination imbues it with life. The student must be taught to make a synthetic picture of the country in all its industrial activities. Every new fact

studied about the country will take its proper place in the picture, and help to make it more complete and more vivid, instead of adding one more fact to be carried by the memory. The imagination plays such an important part in this subject, that it will be discussed further in connection with the chapter on the teaching of commercial geography.

The imagination plays quite as important a part in the study of industrial history. The past must be reconstructed with all its activities. Only by regarding it in its unity can we draw the valuable lessons it gives us. Unless the imagination constructs these pictures, the study of history becomes a mere chronology of facts. Elsewhere it will be shown how the imagination can be applied to the greatest advantage in the study of the history of commerce.

It is possible to trace the imaginative element in every subject, — even in arithmetic, which seems so far from it. Here, again, the imagination gives life to the problem by relating it to the concrete activities of life. What is a problem in bank discount to the unimaginative student? Merely an example in interest, — in multiplication. To the student whose study of arithmetic has been correlated with the study of business processes the problem recalls the bank, the note, the technique of discounting a note, etc. And thus the example in arithmetic becomes a vehicle for a better understanding on his part of the ways of business. In every respect, then, the imagination helps to lift us out of mechanical routine into novel paths full of possibilities of progress.

2. *Æsthetic Training.* — It was pointed out before that complete living comprehends the ability to enjoy one's leisure. Training in the appreciation of art has only an indirect bearing commercially (we do not have in mind training to become an art dealer), but it results in giving us a

completed self-realization of the richness and possibilities of life, of putting our souls in rhythm with the larger life, — the life of the spirit, of which the industrial phase is after all but a fragment. The refining influence of art, literature, and music is what prevents the soul from getting sordid in the counting-house atmosphere and helps it to realize that there is a larger life than that of business.

For this reason the study of literature should be kept up during the entire course. A love for the great works of the master-minds of the past, and an appreciation of them, is what the course in literature should produce, so that when the student leaves school he will still retain that habit of reading which will continue to exercise its refining influence on him and open for him a path for self-culture. The study of music, similarly, ought to have as its object not technical proficiency, but power of appreciation. This can only be gained by repeated listening to good music. The school can do only a limited amount in this direction, but as in other subjects, it can lay the foundation on which the student can build by his own initiative.

In the teaching of drawing we find the æsthetic element made a means to an end, and the teaching of art acquires a utilitarian object. Here the achievement of the beautiful is pursued not for its own end, but because it enhances commercially the value of the object with which it is associated by making it more in demand. The association of the artistic with the useful is a very desirable thing, — especially in American manufactures, where the needs of utility are apt to interfere with æsthetic requirements. Europe has shown us that the requirements of both can be met in the same object, and we are slowly following suit. A greater appreciation of the importance of the æsthetic element in commerce will add

greatly to the equipment of the man of business, and make him better fitted to compete in the markets of the world.

There are other subjects of the curriculum which can be made a valuable aid to æsthetic training, — bookkeeping, for example. The bookkeeper who has learned to keep a neat and attractive-appearing set of books is worth a great deal to his employer, not only because his work is striking to the eye, but because he takes pride in his work, and is therefore apt to be more careful than the other. Habits of order and system have their æsthetic side, in addition to their utilitarian, in making us love the appearance of order and system, and making the exercise of those very important habits easier.

3. Training of the Will. — By training of the will we mean, in general, the training to do and to refrain from doing things. The will expresses itself in activity. But while it is involved in all mental acts as well, by a process of abstraction we denominate only such acts as acts of the will in which the mind expresses itself in action.

Now the will involves deliberation and choice between a conflict of motives. If these factors were necessary in all our actions, very little would be accomplished efficiently. But here we are helped by a remarkable factor, — habit. The law of habit is that anything which has to be done with conscious effort of will requires less and less effort on repetition, until finally it becomes second nature, and can be done without the intervention of consciousness. The ability to do things this way leaves the will free to handle the larger problems before it, and to accomplish complex tasks in virtue of the power to relegate to habit the details involved. Thus arises the paradox that we train the will in particular directions by making its use in those directions unnecessary.

The practical task for the educator, then, is the developing

of habits. The test of our ability to do a thing is the ability to do it without thinking. The efficient mechanic has developed habits which enable him to do good work. In the planning of his product he has to use his intellect. But the details of execution are adjusted by his habits. So the good bookkeeper does not have to think before he can tell how to journalize a transaction. If he had to do so, it would waste the time of the business, and prove that he was not sufficiently trained. It is needless to point out that the teaching of stenography is a training of the habit to form shorthand outlines without thinking. Speed would be entirely out of the question if the student were not familiar with his outlines to such a degree that he could produce them automatically.

Besides particular habits which are important in developing the expert in the particular trade or vocation, there are also very essential general business habits, applying to all lines of activity. These are formed not in connection with a special line of work, but in the general line of business training. Certain habits are indispensable to the success of the business man. The school in its routine aims to form these habits which, once acquired, especially at the impressionable age of school, are not easily broken. Some of these are habits of industry, economy, system and order, neatness, punctuality, obedience to law, and certain habits more directly spoken of as moral. The importance of these habits is too obvious to require extended discussion, but a few words may be said on how the school can help the student to acquire them. Industry and punctuality and obedience are of course the cardinal virtues of the school, and they are insisted upon not for their own sake, but because they are requirements for success in life. The development of systematic habits is par-

ticularly important in business, — and the study of office practice and routine ought to impress upon the mind of the student not so much a particular way of handling certain matters, but the necessity of handling them systematically. System means expedition by saving our time and enabling us to put our hands on things when we need them, a saving of energy and temper. It stands for efficiency. “A place for everything, and everything in its place” — this ought to be impressed upon the student.

The habit of economy is a very important one nowadays, for the training of which the school can do something. An examination of the causes of high prices will show that a great factor entering is that of waste. Too much is wasted that could be utilized. Our most successful industries are those in which waste is minimized and everything made use of either in an increased main product or in the form of by-products. The oil and meat industries are two conspicuous examples of business economy and utilization of waste to form valuable by-products of commerce. Out of a waste-product — coal tar, which fifty years ago was thrown away — has grown an industry yielding an annual product of \$50,000,000.

The school will help to develop in the student the habit of economy by teaching him practically how to take care of his property and of that of the school so as to decrease wear and tear, and didactically by the study of examples of economy in industry, such as described above.

There is another habit which the school develops, and which is very important in business, — loyalty. In school the student develops a certain *esprit de corps* in virtue of his being a part of the school organization. It takes the form of school pride and a certain amount of unselfish interest and sacrifice of personal convenience for the sake of the institution. This

same form of loyalty is manifested in life in the shape of patriotism and civic pride.

Now it is very desirable to imbue the student with the spirit of loyalty to his firm and to its interests, just as the house on its part ought to display toward its employee a spirit of fair-dealing and an appreciation of good service.

The school can be helpful in impressing upon the student the fact that just as he takes pride in the welfare of the school of which he is a member, so he should take an active interest in the success of the firm, to which he ought to devote the best of his services, and have a right to expect appreciation in accordance with his efforts.

The discussion of the training of moral habits is connected with the general problem of education, — the aim of which is sometimes said to be the development of character. Aristotle speaks of character as a bundle of habits. In using this term he implies that a man's character is nothing but a series of dispositions to act, which have been developed in the course of education. This view of character simplifies the problem of the educator. Moral training is principally the development of the habits of right action. These must be guided or supervised by the insight of what is right or they do not serve us in a difficult situation to which our habit is not entirely adjusted.

A complete discussion of the general problem of moral education is not entirely in place in this work. Only one phase of it as related to business ought to be mentioned here. There are certain notions of so-called business smartness still prevalent in some circles, which are happily yielding to a more enlightened conception. These find expression, perhaps, in the view of an old school of economists, that what one party gains in commerce the other one loses, and when

a man "drives a bargain" with another he does so at the expense of the other. These notions are only expressions of a common view of business, which not only condones misrepresentation and sharp dealing, but actually applauds them by calling them business knack and ability. Sound economic theory has demonstrated that commerce is based upon mutual advantage; that in the long run it cannot prosper unless it is characterized by honesty, reliability, truthfulness, and fair dealing. Firms which have adopted these standards have built up a good name which is their most valuable asset, and constitutes an essential part of their good will in trade. They prize their trademark because people have learned to look upon it as a guarantee that the goods possess all the qualities alleged of them.

It is a question whether the school ought to offer a special course in business ethics. If such a course is given, it ought to emphasize first that it is the individual's duty to be honest and truthful and loyal in business, and secondly, that it is the best policy to be so, and that it pays in the long run. Nor should emphasis upon these qualities be confined to the course on business ethics. All the other subjects offer abundant opportunity for impressing these lessons.

We have now reviewed the essential subjects necessary to give the student the proper outlook upon business, and the particular factors involved in his training. We must again make clear the fact that the school is only a preparation for real business, and that it cannot expect to turn out a completely trained business man. No school, no matter how fine its curriculum and efficient its instruction, can take the place of experience on the firing line in contact with men. But given the man with thorough preliminary training entering commercial life, and in a short time he will shake off his

diffidence and lose his awkwardness, and come into a position in which he can apply his scholastic learning to real problems of everyday business, with a larger mind and a firmer grasp than the one who "started at the bottom."

However, let not the student who has completed the commercial course assume that his education is complete. He is only prepared to make *an intelligent start*. To rise in his field he must keep abreast of the progress of the times. Having secured a general commercial culture in school, it is now his duty to specialize in his studies, in the particular business line which he has chosen. To provide such means for specialization is the function of the higher commercial school.

The work of the latter ought to be especially fruitful, because its students have actual business experience, and are constantly in a position to test theory in practice, and to interpret their practical experience in the larger light of the experience of their masters in the same field.

SUMMARY

The apprentice system in business is rapidly yielding to special educational preparation in the school. Specializing for business ought not to be begun before the general foundation in the elementary school has been laid. The vocational aim, combined with the culture and disciplinary aim, should rule in the secondary school. Higher and narrower specialization is in place only in the university school of commerce.

The essentials of a business education are discussed under the heads of language, mathematics, bookkeeping, and accounting, business practice and office routine, stenography and typewriting, science, technique of commerce, economics, commercial geography, history, civics, commercial law, and miscellaneous subjects.

Disciplinary phases of business education : Business practice, commercial geography, and the technique of commerce train the power of observation ; commercial law is very effective in training the judgment ; the natural sciences are the best subjects for inductive training, and mathematics and economics and law the best for deductive reasoning. The imagination is a power, the development of which is very important to the business man, because it aids him in planning ahead, and making a mental picture of the results of his planning. In commercial geography and history, we find the greatest scope for the exercise of the imagination.

A greater appreciation of the importance of the æsthetic element in commerce will add greatly to the equipment of the man of business, and make him better fitted to compete in the markets of the world.

Among the business habits which the school should help to develop are : industry, economy, system and order, neatness, punctuality, obedience to law, and habits directly referred to as moral. Training in both business etiquette and ethics should be furnished.

EXERCISES

GROUP ONE

1. Discuss the need of special commercial education in light of the fact that some captains of industry are self-made men.
2. What influence has the disappearance of the apprenticeship system had upon the need of vocational training in school ?
3. What general scheme of education would you advise for the boy who expected eventually to take his father's place as the head of a dry goods concern ? Give reasons.
4. Why should music, physical training, and literature be included in the curriculum of a commercial high school ? Discuss fully.
5. Should foreign languages be studied by pupils who wish to train

for a business career? Why? Which would you include in the curriculum? On what basis would you advise a student to make his choice of a language?

6. Discuss the place of the sciences, history, and mathematics in commercial secondary education.

7. Of what cultural and disciplinary value are a study of (a) bookkeeping, (b) stenography, (c) commercial law?

8. Every scheme of education should provide for the development of observation, judgment, reasoning, and imagination. Show how the ideal commercial programme meets these requirements.

GROUP TWO

1. Assume that you are in charge of a commercial high school, and that you wish your teachers to form a reading circle. Plan a course of eight topics on educational psychology, which will have sequence, and which will cover the subject in the school year. Indicate specific references for each topic.

2. Outline a talk on the psychologic and pedagogic bases of commercial education, suitable for delivery before a convention of teachers.

3. Prepare a detailed set of instruction for the history, English, and science teachers of a commercial high school which would aid them in modifying their usual instruction so as to make it available for commercial pupils.

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CHAPTER II

THE COURSE OF STUDY OF THE SECONDARY COMMERCIAL SCHOOL

THE PROBLEM

IN the previous chapter we discussed the subject of the essentials of a business education, in the course of which we had to consider the choice of subjects to be taught and their educational values. The question to be considered here is, how can these subjects be arranged in a four years' commercial course so as to furnish on the one hand a graded course of special instruction, and on the other a proper correlation with the other subjects requisite to the general culture of the individual.

And here comes the first question that challenges our attention. Shall the curriculum of the commercial high school be based upon that of the general secondary school, with the substitution of commercial subjects for some of the general academic subjects? Or shall the entire course of study be arranged solely with a view to the aim for which we are preparing the pupil, viz., to fit him to take his place in his vocational environment? If the first is to be our basis, then the work of mapping out the course must be left to the educator who lays out the general course, with such special assistance as he may choose to get from the commercial teacher, in the matter of placing those subjects in the schedules. But this arrangement hardly satisfies the true function of the

commercial school. The latter is not an ordinary secondary school, with the substitution of bookkeeping and stenography for certain of the subjects. The course of study in the specialized school we are considering should not parallel the general secondary course but should aim at the construction of an entirely new curriculum with an aim somewhat different from that of the ordinary high school, or in which all subjects — the commercial as well as the others — shall contribute to the attainment of the practical end.

The planning of such a curriculum requires a person who has the broad vocational outlook, as well as a deep view of the philosophy of education: one who understands how to blend the practical with the disciplinary elements in education, so as to secure the latter without sacrificing the former. Perhaps no individual is competent to carry out a difficult task of this kind, without the advice and coöperation of representatives of all the departments. And the advice of these specialists will be worth while only to the extent to which they, too, have the vocational point of view.

Before attempting to construct such a course, we must again examine the principles upon which it should be based. The two questions which every curriculum answers are, first, what subjects shall we teach, and secondly, in what order shall we teach them? The first question we attempted to answer in the preceding chapter, and we only need to recapitulate some of the essential points.

The choice of subjects is primarily determined by the consideration of the civilization of which the individual is a part, and particularly by the specific vocational environment in which he will take his place after he completes his studies at school. Our knowledge, therefore, of the nature and requirements of business life, determines us in the selec-

tion of the subjects. But other studies, not directly vocational, press their claims, and some of these we recognize the justice of and admit them into the course for these reasons:

(1) They may be necessary to widen the horizon of the pupil, whose confinement to the vocational subject is apt to render him oblivious to the importance of other fields of business achievement. An insight of this interrelation is not only important from the cultural point of view, but also from a practical business point. A proper study of related fields will give the student a better grasp of the meaning of his own.

(2) The subjects may be necessary to develop the intellectual grasp of the student, without which he will find it difficult to handle some of the advanced commercial subjects. This consideration is particularly important in the arrangement of the syllabus for the individual subjects which are not primarily commercial, but which are taken up because of the commercial applications to which they lead. Now the study of these applications is very unfruitful unless it is based upon a sound view of the fundamental principles of the subject. Examples of subjects of this type are mathematics and chemistry.

(3) There is another group of subjects which we include in the high school, because they are necessary for the education of the whole man: physical training and hygiene for the physical man, and music for the æsthetic man. It is a fact that may be noted here, by the way, that these two subjects, so often relegated among the non-essentials, were the two comprehensive subjects of education of the Athenian people — the most highly cultured nation that ever existed.

Taking all these principles of choice, the educator is still confronted with a difficult task. So many subjects press for attention to be admitted into the curriculum, that it becomes as much a question of what subjects we shall admit with the greatest advantage, as what subjects we can exclude with the least disadvantage.

Having decided what subjects we will admit into the curriculum, we have to consider in what order of time we shall teach them, and how much time we shall devote to each:

in other words, the construction of the course of study proper. This question the educator can only answer successfully with the coöperation of the various departments of study concerned.

The specialist in commercial education can only give general directions to the other departments as to what requirements of business the study of their subject ought to meet. It would be the height of presumption and a gross interference with their prerogatives, were he to dictate to the specialists in the other subjects what order and arrangement of topics should be adopted in the teaching of their specialties.

Each department must therefore work out its syllabus in accordance with the time allotted to its subjects in the course. But to do this work with success and in sympathy with the aim of the commercial course, the teachers of the other specialties must keep in touch with the requirements of the business world, which the study of their subject will meet.

As we implied by one of our previous statements, the programme builder must determine the allotment of time to the different departments, not arbitrarily, but after an examination of the various maximum and minimum demands or estimates by the various departments. And the result of this examination in assigning a number of periods to a subject is not to be considered as a measure of its absolute value, but as a determination of its importance, modified by the granting of the rightful demands of other important subjects.

The following course is constructed on the basis of a four years' course with twenty-eight periods of work per week, each period of the length of forty-five minutes. Counting thirty periods to the week, this would leave two periods of unassigned work, which might be devoted to study, conference, and general assembly periods.

COURSE OF STUDY

FIRST YEAR		SECOND YEAR	
<i>Subjects</i>	<i>Periods</i>	<i>Subjects</i>	<i>Periods</i>
English	4	English	4
German } or }	4	German } or }	4
Spanish }		Spanish }	
Algebra	4	Plane Geometry }	4
Industrial Biology	4	or Stenography }	
Commercial Arithmetic	2	Industrial Chemistry	4
Business Writing and Forms	3	History	3
City Industries and Municipal Activities	2	Bookkeeping and Office Practice	4
Music	1	Drawing (or Shopwork)	2
Physical Training	2	Physical Training	2
Drawing	2	Music	1
Total	28	Total	28
THIRD YEAR		FOURTH YEAR	
English	4	English	4
German } or }	4	German } or }	4
Spanish }		Spanish }	
History	3	History (U. S.) and Civil Government	3
Physics	4	Commercial Law	3
Bookkeeping	3	Economics	4
Commercial Geography	3	Arithmetic	1
Technique of Commerce }	2	Accounting and Auditing }	4
Mathematics }	3	Technique of Commerce }	2
or		or	
Stenography } and }	7	Stenography } and }	8
Typewriting }		Typewriting }	
Physical Training	2	Practicum (Observation)	1
		Physical Training	2
Total	28 or 30	Total	28 or 30

PRINCIPLES UPON WHICH ELECTIVES ARE OFFERED

We may group the courses of the school of commerce into three divisions: (1) the course in commerce; (2) the bookkeeping course; (3) the stenographic course. As a matter of practical desirability and convenience, it will be found best to combine (1) and (2) into one course. This will give us a new division into groups as follows: (1) the commerce-bookkeeping course; and (2) the stenographic course.

It will be shown in the succeeding comments on the course of study that, as stenography and typewriting are technical subjects, of little practical advantage to any but those who expect to become stenographers, they will have to be excluded from group (1). On the other hand, it will be explained in this chapter below, that a stenographer should be equipped with a pretty thorough knowledge of commerce and bookkeeping, in addition to his special acquirement.

Now, if we offer courses in commerce and bookkeeping, as a part of group (2), the question arises as to how we shall make room for stenography. In the first year the question does not arise. But in the second and third years the subject is parallel with mathematics which the accountant needs for its training in methods of analysis, but which we may dispense with in the stenographic course to much better advantage than chemistry or the foreign language. (The study of the latter, by the way, may be of great assistance to the correspondence branch of the business.)

To make room for additional work in typewriting we shall have to take out an additional subject from course (1) in the third year,—the technique of commerce. Additional work in typewriting is also provided by increasing the number of periods of the stenographic course to thirty per week in the third and fourth years. In the fourth year,—accounting and the technique of commerce are made elective, to make room for stenography.

An examination of course (2) (the stenographic course) will show that it provides a very fair training in the subjects of commerce (commercial geography, economics, etc.), a good training in bookkeeping, and a thorough training in stenography. Thus provision is made for the student who wants to become both bookkeeper and stenographer, and additional facilities are given to him to obtain an acquaintance with the meaning and function of commerce.

EXPLANATORY REMARKS ON THE SUBJECTS OF THE COURSE

English. *Literature.* — The study of literary masterpieces is undertaken in all the four years, with the same object as in all schools, — the appreciation of our great masterpieces.

Grammar and Composition. — The mastery of English for commercial rather than literary purposes is emphasized. Grammar is reviewed and the principles of composition are studied, and practice given in descriptive and narrative themes, based on practical, rather than literary topics. Commercial correspondence should form an important part of the work.

In the second year the student makes a special study of exposition, and writes themes on commercial processes and other technical matters. There is always a good opportunity to correlate by selecting themes from other departments of study, especially those in commercial subjects. In the third year the student is offered practice in special commercial topics, like writing reports on various business matters, addressed to the employer; writing and arrangement of advertisements; condensing letters into telegrams, etc.

In the fourth year the principles of argumentation are taken up. The topics for debate are then based principally upon economics. Debating is a regular class exercise and not left to literary societies. The advantages are, that the student gets a good grasp on the questions of the day, and learns how to express himself fluently, clearly, and forcibly. Practice in written compositions is given to him by the requirements of a thesis embodying the results of his own observations in practical business, tested by the general principles which he has learned. As in the other three years, there is practice in writing short themes, and besides, an intensive study of trade reports and trade journals.

Foreign Languages. — The student is given the choice of German or Spanish. It is idle for him to attempt two foreign languages, for unless he can undertake a language in order to obtain some degree of mastery of it, his time will be practically wasted. And to study a language for less than four years for any practical advantage is out of the question. As to the study of the language itself, the purpose of taking it should be mainly a practical one, — to facilitate the student's work in his future relations with the country whose language he is studying. Conversation, technical phraseology, and commercial correspondence are therefore of far more importance than the literature or the philology of the language. As to why French is omitted from the list of languages to choose from, it is clear that while it is the language of diplomacy and polite society, it is not of coördinate importance commercially with Spanish and German.

Mathematics. — In the discussion of mathematics under this heading, we do not specifically refer to commercial arithmetic, which is treated separately, because the commercial side of it is more important than the mathematical one. The question often arises, Why should we teach mathematics at all? The answer generally given mentions the disciplinary value of the study: its development of the power of reasoning, habits of accuracy, etc. But to include the subject for three years in a commercial curriculum, we must give a more satisfactory reason, because there are a number of other subjects which are just as valuable as mathematics in their training of the mind. Nor does it always follow that the mathematician's reasoning power is good in other than the abstract field of mathematics. We must reënforce our argument for the study of mathematics by reference to its utilitarian value.

Mathematics, in particular algebra, gives us a new language, a symbolic one, which is indispensable in many calculations relating to values. It is entirely impossible to understand many of the aspects of accounting without a knowledge of the meaning and the manipulation of formulas. Nor can we understand calculations in chemistry and physics without use of such formulas. It is needless to refer to the fact that many problems of higher arithmetic can be solved more rationally and with greater ease by algebra.

First Year. Algebra is prescribed for all students.

Second Year. Plane Geometry, — a subject which, if well taught, is a great stimulus to the imagination and to inventiveness, and to the power of sustained thinking. It is not offered to those who pursue the stenographic course.

In the third year the student returns to algebra as an elective. He emphasizes particularly those phases of it which are necessary for finance. Logarithms are studied, because they facilitate financial calculations. Among other topics are progression, permutations and combinations, and the theory of probabilities. The mathematics of finance is included in this year: such as compound interest, present worth, annuities, investments, life insurance, etc.

Industrial Biology. — It was pointed out before that while a study of biologic processes is necessary as a theoretic foundation, the study should lead up to the economic aspect of the subject: how these processes affect man in his life and in his activities. Botany is of course a very important aspect of this subject, because many of the materials of commerce are of vegetable origin. In constructing his course the teacher will take up among other topics the raising of plants, the biological history of the plants of commerce, and their preparation for the market. A study of the diseases affecting plants

and their influence on commerce is also to be undertaken, together with a study of their remedies.

Industrial Chemistry. — The course in Industrial Chemistry is intended to be given the second year of the course. Starting with the theoretic basis of chemistry, — chemical law and processes, — and the principal elements, it specializes in the direction of the industrial applications. The field is large, and the teacher will find himself at a loss what topic to select. But some study should be devoted to the following: Chemistry of coal; petroleum and its refinement; illuminating gas; chemistry of the soil and fertilization; the ores and their reduction; dyestuffs; chemistry of food; food preservations and food adulteration; the chemistry of stains; the chemistry of fabrics.

Physics. — Physics follows chemistry, and is taken up in the third year. The usual course in elementary physics is followed with special attention to the industrial phases, such as machines, motive power, the steam engine, and electricity and its applications. To make room for many of the applications of physics it may be necessary to eliminate a great deal of the mathematics of the subject.

History. — The course in history brings up the question whether the history of commerce ought to be taught as a separate course and in the department of commercial subjects. On the whole, we believe that the history of commerce had best be taught as a part of the general historical course, — first, because taking it out of the regular course deprives it of its proper background, and secondly, because the commercial teacher is apt to lack the historical perspective. In view of the fact that historical students are concentrating their attention more and more on the social and economic side of history, and are subordinating the political and military side; and as

modern text-books are written with this in view, it would be safe to leave the history of commerce to the department of general history.

The first half year of the second year will be devoted to a rapid survey of Greece and Rome, leaving a year and a half for general history, with special attention to English and modern German political and economic history.

The fourth year will take American history and civil government. An important part of the study of our government should be devoted to a detailed inquiry into its departments, their administration, and particularly their relation to commerce. Those of greatest importance to the business man are of course the Treasury Department, the Department of Commerce, the Post-office Department, and the Department of Agriculture.

COMMERCIAL SUBJECTS. Industries and Commerce of the City. — This course is prescribed for the first half year. It forms the proper introduction to commercial geography and to technique of commerce in general; for many of the industrial activities of the world are exemplified in or about a local centre. The same reasons that apply to beginning general geography with the study of the home environment apply with equal or greater force to beginning commercial geography with the industries and commerce of the city or locality in which the school is situated.

Municipal Activities. — This course continues the study of the city with reference to the political and economic activities of the city government. While a knowledge of how the city is governed is, of course, one of the principal aims to be attained by this course, it is by no means the only one. The administration of the city is like that of a great corporation; municipal problems outside of governmental ones continually

confront us. This course would therefore include the consideration of civic problems such as the transit, the city beautiful, congestion of population, health, and other problems.

Commercial Geography. — This course is set down for the third year. It may arouse some comment why the course is postponed to such a late period, as in some commercial schools it is actually taught in the first year. If, however, the course is to be preceded by one on the locality, it is out of the question to give it before the second year; and it is best to defer it until the third year, for reasons that will be apparent. It must be understood that commercial geography is not a mere study of a list of countries, their chief products and commercial ports, etc., although it is often studied as a catalogue of facts.

If properly taught, it is designed to develop real power in the student, to awaken in his mind a view of our commercial standing, our trade problems, our commercial rivals, and the possibility of expansion. It, therefore, would take minds of some maturity to undertake such a study. Our third-year student will have a good preliminary training in his study of industrial geography of the locality and in his courses on biology and chemistry, which constitute a scientific course on the materials of commerce. The latter, in a crude fashion, is frequently included in commercial geography. After the student has been grounded in biology and chemistry, his review of materials of commerce in connection with his commercial geography is much more than a mere study of a cut and dried catalogue of products. We have mentioned the fact that the course on commercial geography should include the careful consideration of trade problems, — such as competition in the world's markets, the Oriental trade, and the

probable effect of the European War on the commerce of our country and that of the combatants.

Commercial Arithmetic. — Provision is made for this subject in the first year for two periods a week. It includes not alone a thorough drill in fundamental operations but also the handling and solution of practical business problems of calculation. In the last year of the course, one period a week devoted to the study rounds out the practical knowledge of the student, and gives excellent material for correlation with accounting and economics. The teacher of advanced arithmetic should not fail to take advantage of the student's knowledge of algebra in order to simplify, organize, and rationalize this part of the work.

Business Technique. — This course is preparatory to the course in bookkeeping. It includes, in the first half year, practice in penmanship, and in the second half year the study of business forms such as checks, drafts, bills, invoices, and other forms in every-day use in business.

Bookkeeping and Office Practice. — In the second year of the course the elements of single and double entry are taken up as applied to various forms of business.

In the third year more advanced work is taken, such as corporation books, specialized sets, etc. For a detailed discussion see the special chapter on bookkeeping.

Accounting. — Provision is made for a whole year's study of the subject. What shall we include in it? As a special chapter will be devoted to it, it need only to be considered briefly here. The elementary theory of the whole subject will be taken up. It will be a deductive study of what was done inductively or empirically in bookkeeping. To understand the place of accounting, we may use the analogy of geometry here. Our first knowledge of geometrical facts was

empirical; that is, obtained from experience. The human mind then recast its body of knowledge into a system, by deducing it from fundamental principles. The relation between bookkeeping and accounting, then, is the same as that between empirical geometry and Euclidean geometry.

But besides the scientific study of the theory of accounts the course will include the study of auditing; and also practical accounting. In addition to the solution of accounting problems there will be continual practice in the interpretation of accounts, in cost accounting, in deductions to be drawn from profit and loss statements and balance sheets, and in recommendations to be made on the basis of these statements.

Economics. — This study necessarily comes the last year: first, because of its difficulty; secondly, because before any person can be in a position to draw economic conclusions, he must have a large basis of fact. In the fourth year the student can handle economic problems intelligently, because he has three years of stored-up experience to draw upon. There can be no question, of course, as to the importance of the subject, as economics is the philosophy of business. The course should be supplemented by a study of the principles and practice of corporate and public finance.

Technique of Commerce and Industry. — This subject is provided for in the third and fourth year of the course. It is not offered to the students of stenography. Only a few brief remarks will be made here on this subject, as it will be treated at length in a succeeding chapter. Most of the topics under this subject are such as would be included in a course on applied economics. Among the topics in the third year are the forms of industry: (1) extractive, (2) manufacturing, (3) distributing. Under (1) we shall discuss agriculture, mining, and fisheries. To differentiate this course from that

of commercial geography, we shall discuss processes and problems of these industries and preparation for market. Under (2) the question of location and organization of manufacturing plants, motive power, etc., will be discussed. Under (3) we shall consider the organization of business for distribution: the wholesaler and the retailer; the corporation; the trust. The study of preparation for the market and the technique involved, such as methods of packing and transportation, etc., is a part of the course.

In the fourth year under the same title, Railway Transportation will be studied in detail. Money and credit will be taken up, including such topics as banking, the exchanges, the commercial credit system, etc. Perhaps in this course, as appropriately as in any other, business ethics might be considered.

Commercial Law. — Three periods a week are assigned to this subject in the last year. While a good text-book is used in this work, references to the sources of the law are not to be overlooked, and wherever possible, some leading cases are to be studied at first hand. A special chapter in this book is devoted to the aims and methods of the subject.

Drawing and Illustrating. — In the work in drawing, the utilitarian element is quite as prominent as the æsthetic. A handiness with the pencil and brush are quite desirable in commercial life, as well as a readiness with the tongue and pen. The course is offered the first two years, but where there are facilities, shopwork may be given as an alternative, for the work of the second year. The value of manual training to the business man is quite obvious. No amount of theoretical study can give the student as good an insight into the construction of things about him, as practice in making them himself.

The course in drawing will include lettering and design, illustrating and arranging advertisements, and perhaps some mechanical drawing.

Stenography and Typewriting. — This is, of course, a very important subject of the commercial curriculum, but it ranks more as a special accomplishment than as a subject of general utility to the commercial student. For a student who is not going to be a stenographer the benefits derived will be entirely incommensurate with the time devoted to it; and if he has no occasion to practise it, he will forget it entirely. For these reasons the course is made elective.

It may be asked why the student of stenography should take practically the entire curriculum instead of devoting his time to making himself more efficient in his specialty. In answer we may say, that aside from the general culture that the entire course gives him, the stenographer gets a thorough insight into business, and fits himself for a position of larger responsibility. Many stenographers have risen to managing positions in the business. We do not want to educate stenographers who are mere machines, but intelligent students of business who realize the meaning and opportunities of the business in which they are employed. An extremely valuable part of their preparation is, of course, the thorough study of English. At the same time we must bear in mind that the acquirement of technique by the pupil is what we are aiming at in the teaching of stenography and typewriting, and that this can be obtained only by a most thorough knowledge of the principles and practice of writing clearly and rapidly.

The work is begun in the second year, when four periods a week are devoted to shorthand. Typewriting may be begun the same year. But, generally speaking, schools will find it

difficult to provide enough equipment, and so the typewriting work is begun with the third year, and three periods are given in addition to the four periods in stenography. A great deal of the practical facility in typewriting the student will have to acquire by writing after school hours, the hours in school being devoted to formal exercises and to criticism. On the aims and methods of stenography and typewriting see the special chapter on the subject.

The question will arise here whether German and Spanish stenography should be taught in the regular course. In a general way we may answer that such knowledge is rarely of any use, — and the occasions where a person might make use of such knowledge are very few. Consequently, it is not advisable to include such special instruction, unless there is a specific demand for it.

Practicum. — In the last year one period a week is devoted to a conference and discussion by the members of the class of results of their own observations in business. Each pupil should be required and given the opportunity to visit great business establishments, to observe methods and processes, and to report to the class.

This work will be of benefit in the following directions: It will reënforce, by practical illustrations, the work taught in the school; it will give the student practice in oral and written composition; it will sharpen the power of observing and the critical faculty of the student, and it will give an opportunity of free exchange of thoughts between teacher and pupils. It will be of the highest importance in those schools which have established practical coöperative relations with the business community.

Conclusion. — We will remark, finally, that the foregoing course of study represents one which, in the minds of the

authors, represents a standard type. There are, it is true, disturbing influences in many places, which compel deviations from the type. Such influences are: the impossibilities of having a separate commercial high school, and therefore the necessity of combining the commercial students with the other students of the school in certain subjects; the fact that some pupils change their minds about continuing their commercial course, and desire to change to the academic course, and the consequent necessity of making such transition possible; the fact that many pupils drop out before completing school, and the necessity therefore of making the first two years of the course more or less complete in themselves. Many other disturbing circumstances might be thought of. Now to construct a course of study in which all the possible disturbing elements should be taken care of is an impossibility. To construct such a course, having in mind some of these elements, would not be presenting a standard course of study. The best solution to our minds seemed to be to arrange a course as it ought to be under more or less ideal circumstances, and to allow each educator to modify it for himself in accordance with local conditions.

The objection to deviation, in certain subjects like English, from the standard course set by the college entrance board, on the ground that the latter board will not give credit for such subject, should be of little moment. The time has come when the college entrance board must recognize that its requirements should keep abreast with the demands of the time. There is no reason why some commercial subjects, which are of as great disciplinary value as most academic subjects, should not be credited for college entrance. Provision for this has only recently been made. But much still remains to be done. What reason is there for setting a uni-

form course in language for all schools? Is there any particular ground for the board's refusal to recognize that there are other uses of English besides literary? If teachers will persist in their rational demands for full recognition, their requests will be granted.

SUMMARY

The planning of a curriculum requires a person who has the broad vocational outlook as well as a deep view of the philosophy of education. Our knowledge of the nature and requirements of business life determines us in the selection of studies. But studies not directly vocational are also included because they are broadening, because they develop the intellectual grasp, and because they are necessary for the education of the whole man. ✓

A course is presented, which is constructed on the basis of four years' work, with twenty-eight periods per week. There are three divisions to the curriculum: (1) the course in commerce; (2) the bookkeeping course; (3) the stenographic course. (1) and (2) may be combined, so as to give us these parallel elective courses: (1) the commerce-bookkeeping course, (2) the stenographic course. The latter will include some work in bookkeeping and the science of commerce.

The courses outlined represent a standard type. Local conditions may compel a slight deviation from the type.

EXERCISES

GROUP ONE

1. Can an ideal commercial curriculum be formed by modifying a general course curriculum, or must an entirely new one be arranged? Give reasons.
2. Divide the commercial programme into three groups of studies, and give three examples of each division.

3. Why should the bookkeeping and stenography departments of a commercial high school be separated?
4. Show how the treatment of algebra in a commercial school differs from the treatment in a general high school.
5. Give the content of a course in commercial geography.
6. What is the place of economics in the commercial high school course?
7. Should typewriting be studied by pupils who do not elect stenography? Why?
8. If a pupil can remain in high school long enough to take only one year of bookkeeping or stenography, which subject would you advise him to choose? Give reasons.
9. Show the value of the "practicum."

GROUP TWO

1. Prepare a three-year course of study for a commercial high school. Show what principles have guided you in adapting the four-year course for this purpose.
2. Criticise the course of study of any commercial high school with which you are familiar, pointing out its strong and its weak points. Advocate such changes as are both practical and valuable, with reasons.
3. Assume that you were allowed to substitute commercial subjects for twenty per cent of the work offered in any general high school with which you are acquainted, state how you would proceed, and present the result. Defend your choice.
4. State how you would conduct a practicum so as to aid the boys and girls of your school and also the business community.

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CHAPTER III

GENERAL PRINCIPLES OF METHOD

APPLICATION TO THE TEACHING OF COMMERCIAL SUBJECTS

THE general principles of teaching are based partly upon the nature of the subject to be taught, but principally upon the nature of the mind to be taught. While in a general sense principles of teaching are practically the same, the application of the principles to the different subjects raises certain important questions which we shall consider here. The teacher of commercial subjects is particularly interested to know how these principles help him in the solution of the peculiar problems that face him; and as the general writer on education is unfamiliar with the ground travelled by the teacher of our subjects, the commercial teacher generally looks in vain for practical illustrations of the general principles to his special field. The purpose of this chapter, then, is to consider some of the leading principles which should guide the teacher, and to illustrate the application of these principles to the teaching of commercial subjects.

1. Teacher's Knowledge of the Subject.¹—Before considering the subject of teaching, it is necessary to look at the prerequisites for all good teaching, and that is, a knowledge of the subject taught. This involves a certain amount of general culture and special training in the subject on the part of the

¹ For a detailed discussion of this topic see Chapter XV.

teacher who is to undertake the work. It is evident that the person who knows no more about the subject he is to teach than what he expects his pupil to learn, is very inadequately prepared for his task. The successful teaching of bookkeeping, for example, involves an understanding not only of the clerical or routine aspects of the subject, but of the rational or scientific background of it, the science of accounting. The same reason applies here as in the case of the teacher of arithmetic, who should be acquainted with algebra (the science which gives the laws to arithmetic), in order to teach his subject successfully. Our educational authorities recognize this fact by providing an examination for candidates, and an educational prerequisite which covers in scope a great deal more than the curriculum which the teachers are expected to present in the secondary school. But not only must such teacher have a rational and organized view of the field of a specialty, but he must have the general cultural background which will enable him to see the true place of his specialty in the general scheme of knowledge, and enable him successfully to correlate the subject he is teaching with the other subjects in the pupil's curriculum.

It follows, then, that no teacher can be successful who is not a person of culture. It is true that a great many of our teachers of commercial subjects are not persons of culture, because they have not had the opportunities for a good, general education. Many of them have stepped from an unsuccessful business career and have taken to teaching as a make-shift. If those persons only realized that the means of self-culture are within their reach, and if they continued their reading and study, they would make up in a large degree for their early disadvantages. As a matter of fact, the teacher of commercial subjects is required to teach so many different branches,

that if he really understands the subject he is teaching, he is bound to be a person of general culture. A real knowledge of commercial geography and the history of commerce is itself an indication of culture. Unfortunately, many of the teachers who teach these subjects have only a superficial knowledge of the subject they are teaching; a knowledge of what is in the text-book they are teaching.

We must indicate briefly in what way a teacher can make up deficiencies in his general culture, and in what way he can remain progressive.

First: He must keep abreast of the times. That is, he must have access to, and take advantage of, the latest publications in the subjects which he is teaching. The results of that progress are found not in books alone, but in magazines and journals. Again, since a good deal of the material in commercial geography is statistical and as text-books cannot possibly be up to date, the teacher must supplement the statistics in the text-book with those he gathers from various statistical summaries. He must therefore keep in touch with the progress of the world.

Secondly: Where opportunities exist for self-improvement, he must take advantage of them — such as university courses and lectures. Many persons find it difficult to study by themselves. In many cases, the lack of previous training may make it impossible for the teacher to keep pace with the latest publications on the subject and with the latest periodicals in the field. A course in a subject connected with his specialty will therefore not only make up for the teacher's previous lack of training, but it will give him an instrument for self-culture which he can use after he leaves the course. It makes no difference whether the subject he is studying is on a much more advanced plane than the one on which he is working in

the secondary school. If we expect to have teachers who will elevate the standard of commercial teaching, who will show the teachers of academic subjects that this work is just as cultural as, and more so, perhaps, than the other subjects, we must have teachers broad in mind and knowledge, and responsive to the progress of the times.

All this discussion might imply that the ideal teacher of commercial subjects would be a university trained man, who has done extensive work in the subject. This is not necessarily true. In the first place, it is not essential to have a college degree in order to be a person of culture. In the second place, mere knowledge of the subject is not a guarantee of good teaching. There are special problems connected with teaching that require consideration apart from the study of the subject: facts connected with applied psychology, that help us solve many of our problems in teaching. The lack of this knowledge will often lead to failure in teaching. At one time, the only requisite for ability to do bookkeeping was practical experience as a bookkeeper. We now realize how inadequate this knowledge is, how a person possessed of mere office knowledge lacks the perspective and the culture which have been pronounced to be prerequisites of the successful teacher. On the other hand, we realize now that knowledge alone is not sufficient to make a good teacher; that an understanding of the principles of teaching and ability to apply them are both just as important. We have daily illustrations of the woful lack of ability to present the subject on the part of persons who have a broad knowledge of the subject, but who fail to realize that mere presentation of the subject in the form of a lecture is not teaching. In the following paragraphs it is proposed to outline the leading principles of method which the teacher must bear in mind in his work.

2. Principles of Teaching.¹ (1) *Principle of Self-activity.*

— The greatest principle in all teaching is the one which points to the fact that the most successful teacher is the one who accomplishes the maximum of result with the minimum of effort. Teaching consists not in lecturing, but in stimulating the pupils to the greatest amount of effort and self-activity. For this reason, we condemn all methods which consist merely of a lecture or presentation on the part of the teacher. In successful teaching, the teacher is in the background, and merely stimulates the pupil to self-effort by means of questions and problems for solution. In view of the nature of bookkeeping and stenography as subjects which require “doing,” it is not possible for teachers to confine themselves to lecturing on these subjects. But even in accounting, we find examples of teachers presenting the problem, solving the problem for the students, and having them copy the solution.

The proper method should be by means of questions which lead pupils to attack the phases of the problem, and to master the various difficulties by their own efforts. In commercial geography or in history, we are apt to find teachers indulging in lecturing instead of asking questions which stimulate thought. The method by which the student is given certain problems for solution, by which he is led to observe for himself the facts of the world about him, by which he is brought to recognize facts for himself under the stimulus of questions by the teacher, — this method is the one which leads to the highest expression of self-activity. We may sum up by saying that we learn by doing, and doing means both doing and thinking. In fact, thinking is the highest form of self-activity. The person who has thought out a problem for himself, remembers the solution of it without difficulty, while

¹ In this connection see also Chapter I, pp. 24 to 45.

the student who has memorized somebody else's solution has put in a lot of wasted effort in the task, because the solution is kept in his mind by mechanical effort, and the knowledge is only temporary.

(2) *Interest and Purpose.* — Since self-activity of the pupils is the sign of successful teaching, we must indicate some of the means by which this self-activity is promoted. The first step in every lesson should be an attempt to make the student realize the purpose of what he is doing, so as to interest him in the subject. This interest will become a kind of compelling force which will lead him cheerfully to exert the greatest effort in the accomplishment of his task. The principle of motivation has its application in all subjects of the curriculum. It is because the bearing of the thing studied is not seen by the pupil that he frequently approaches his task blindly and grudgingly. If there is any class of subjects in which the pupil ought to have a realization of what he is doing and of the way in which the topic he is learning is going to advance his general efficiency, it is in commercial subjects. The study of these subjects has a vocational purpose. Every topic, therefore, ought to reveal to the students how they are advancing in the direction of better vocational adjustment. The application of the doctrine of purpose, or "motivation," as it is sometimes called, is very extensive. In bookkeeping, we make the student feel that a particular method which we are adopting satisfies a certain need, instead of throwing a lot of rules about journalizing at the pupil. We continually suggest problems and difficulties to him in order to impel him to overcome them; and when this impulse is strongly felt, we show him how to direct it. Thus he approaches the task of the solution of the problem with greater zest and with a greater sense of its importance. In accordance with this

V principle, we should never introduce a new book or a new column without previously having the student realize the need of such a device.

In stenography, too, the usual mistake is to introduce an abbreviation or contraction without an explanation of why such a contraction is introduced. The good teacher ought to put the pupil in the attitude of the inventor of the shorthand system, who, realizing the frequency of a certain word or letter and feeling the necessity for a shorter form, invented a shorthand outline for it.

In commercial geography, facts and figures given to the student find him in only a passive mood for the reception of them. It is only when he has seen the problem, realized the necessity for solving it, and done his part in solving it, that he has come to a sense of realization of the purpose of the task he is doing. The aim of the lesson should, therefore, be stated at the beginning of the lesson, and everything considered should be shown in the light of the realization of the aim. Not that it is necessary for the teacher to stop at every teaching period to show the pupils the purpose of the topic of that particular period. Where such purpose is obvious it need not be stated, but at various stages in the lesson there should be a kind of summary, to bring the student to a realization that the purpose which he had in mind is being carried out.

V (3) *The development of the lesson should proceed from the concrete to the abstract, and from the known to the unknown.* — This principle is a concrete expression of the doctrine of apperception, which plays a very prominent part in educational psychology, and which teaches us that a person's previous knowledge must be brought to bear on the new fact, in order to assimilate it. It is also the principle which has given such prominence to the method of induction in teach-

ing, especially in the development of the principles of a lesson.

All scientific subjects — and accounting is one of them — include a number of laws and principles. These represent the organization of facts in a systematic way. Moreover, this systematization of facts gives rise to principles which are applicable in the interpretation of new facts. No mistake in teaching is more common than the presentation of an abstract rule to the pupils, the meaning of which is not understood; and the assignment of a series of concrete problems in which the pupil is required to apply this rule. In this way the student of bookkeeping is asked to note a certain rule for journalizing, and then required to apply the rule to a particular business transaction. This procedure reverses the order which the good teacher ought to follow. The only way, in which to make a rule intelligible is to show the pupil how it is derived. We must begin with the particular facts which have to be organized. These facts are concrete, but their true meaning is not clear until they have been related to other facts in the pupil's experience. This relation takes place by means of the general rule. The method by which we develop the rule from the particular facts is known as the "Method of Induction," and its advantage lies in the fact that the pupil, as he learns how to organize facts, also learns how to apply the principle of organization to the new problems. This he is able to do, because the rule is not an abstract formula thrown at him, but a principle, the form of which he has developed by his own effort.

The principle of proceeding from the known to the unknown and from the concrete to the abstract, leads to the use of all those concrete methods like pictures, maps, observation trips, etc., that are so necessary as an aid in bridging the gap between

the limited experience of the pupil and the larger experience which we want him to obtain. How could the pupil without these aids ever come to realize the larger world in which he lives, the world of other climes, other industries, other habits of living, other types of thinking? While all teachers use concrete material, nevertheless there are certain mistakes made in the use of such concrete material. Some of these mistakes are as follows: (1) The use of this concrete material as illustrative of the abstract rule, and making the abstract presentation follow rather than precede the illustration. (2) The presentation of the concrete material as a mere diversion, instead of the utilization of it as a step in arriving at the abstract. This mistake is made when the teacher presents pictures, specimens, and experiments which interest and entertain the pupils, but which fail of any educational purpose, because the teacher presents this concrete material without any discussion or relation of it to the general principles discussed. (3) The reliance upon certain concrete aids when the student's mind has outgrown the necessity of those aids. This is not a very frequent error made, but it exists nevertheless. It is the same mistake which we would be making if we drove a baby in a carriage after he had learned how to walk. The use of concrete aids will be found illustrated in connection with the discussion of Aids in Commercial Geography.

(4) *Drill and the Principles of Habit Formation.*—The knowledge of a rule should be developed, as we have seen, from a study of particular examples. But while the purpose of a general principle is to organize the facts which we know, it has still a larger purpose, namely, to serve as a means by which we can interpret new facts which are similar to those we know. The rule itself is of little advantage unless it gives

us the power to solve all the new difficulties that may come up. But as the understanding of a rule is one thing, and the acquisition of skill in the application of the rule is another, the development of the general principle must be followed by practice in its application to numerous examples. It is a common experience to find that in spite of our greatest efforts in developing a subject rationally, in spite of the fact that the students have followed the discussion of the topics in a most intelligent manner, that, nevertheless, the results of the teaching are not permanent; and thus we find that, in spite of our great efforts, we seemingly have accomplished little in the way of tangible results. The cause of this failure is due to lack of practice and drill. The purpose of drill is to give the student judgment in the application of principle to new facts, skill in seeing that a certain problem is to be solved in a certain way, and quickness and unerring accuracy in its solution. We know what arithmetic would be without numerous examples for the students to practise on. We realize how ineffective our teaching of accounting would be if it were confined to a mere discussion of principles, without the opportunity on the part of the student to solve problems.

But there are certain subjects which require drilling to a greater extent than other subjects. In certain studies we want to develop such a degree of skill that the pupil will be able to solve the problems immediately, and without the slightest reflection. We may call such subjects habit subjects, and the principles underlying habit formation we shall note very briefly below. There are other subjects in which the organization of facts studied is perhaps more important than the application of those principles to other facts. One of these subjects is commercial geography. In this subject our aim is to give the student an organized view of the factors

that condition commercial activity in the world. Of course, the purpose of the study is to give the pupil the ability to interpret a new situation as it arises, in the light of that principle, but the main purpose is to give the student a systematized view of the world's activities. Drill, therefore, plays some part in this subject, but organization — and by this we mean organization by the pupil and not by the teacher or the text-book — plays a much more important part.

In commercial law, on the other hand, there is very little time to develop the principles of law. The aim is not exactly the organization of the student's legal knowledge, but the ability to apply a general principle of law to a particular state of facts. Hence, in commercial law, application or drill is a much more important factor than in commercial geography. To make the knowledge of principles dynamic, so to speak, we must give the students numerous cases — problem cases — to solve. The value of a knowledge of general principles as such is very slight. Even in our examination in commercial law we realize that fact, when we give an examination paper composed entirely of problems. To illustrate further: An examination in arithmetic does not consist, in great part, of questions on rules, but is given up almost entirely to problems to be solved. Similarly, an examination in commercial law does not require the student to give a general statement of rules of law applicable to a large topic, but requires him to apply his knowledge to particular cases. Hence, intelligent drill, drill in which the student has to re-think the particular rule of law, in order to see how the rule applies to the facts, is the kind of drill that is most efficient in this subject. ✓

Again, there are subjects in which the presentation of the rule furnishes no difficulty at all, subjects in which the knowl-

edge of the rule as such is of practically no importance. These are subjects in which the student is asked to accomplish a certain technical task. We refer to the habit subjects. In this class, we include stenography, penmanship, and certain phases of arithmetic and bookkeeping. These are subjects in which mechanical accuracy is the important requirement, and in which it is considered a deficiency for the student to have to stop to think over his problems instead of coming to an immediate decision about them. Stenography is a subject in which the student is asked to apply general principles. The principles themselves are very simple, but the application of them, with accuracy and speed, is a matter of practice.

Hence, the great problem in these subjects is, how to develop mechanical accuracy, and not how to develop a knowledge of the principle. The development of speed is a matter of practice or drill. The understanding of the principles in stenography is so simple that we do not, as a general rule, expect the teacher to develop the knowledge of it inductively in connection with this subject. But as teachers, we use the greatest amount of skill to develop in a student the habit of applying the principle unerringly and rapidly. The power to do so is something that can only be developed by constant practice. But practice alone is not sufficient to develop the skill. There must be certain other considerations kept in view to develop this unerring accuracy. This leads us to a consideration of the principles of habit formation.

Assuming that the student knows the rule, there remains the problem of how to lead him to apply this rule and how to train him in the unerring and rapid use of it. First, there must be the incentive which will lead him to pursue his task with interest. Dull and deadening drill will not give that

incentive which will lead to practice with a good will. It is for that reason that good teachers in stenography introduce dictation at the very beginning of the subject in order to make the students feel that they are actually taking dictation, and in order thus to give them the incentive to do their work well. Of course, misdirected practice at the stage of the development of habit will lead to the formation of wrong habits, which it will take a good deal of time to eradicate. The development of bad habits comes at the formative stage of the subject. In order to prevent the formation of bad habits, the teacher must be watchful to the highest degree. As long as the particular work to be done still requires deliberation, it is a sign that a habit has not yet been formed. If the student has to think how he is going to debit or credit a certain item, he has not yet developed that mechanical proficiency which is so essential.

It is at this stage in the process of the development of a habit that the teacher must be watchful. When the student is able to do his thinking quickly and without the necessity of reflection, then the teacher's vigilance may relax, because the habit of doing the work correctly has already developed, and there is little danger of the student's relapsing into a bad habit. Thus, if the student has got into the habit of muscular movement in writing, it is no longer necessary to watch him in order to see whether he is actually using the muscular movement at all times, because it is more natural for him now to write in the correct way,—the habit of doing so has developed. The objection may be made that it is not desirable to try to develop such mechanical accuracy that the pupil will dispense with the necessity of thinking. In certain subjects, however, such a proficiency is absolutely necessary. Even in arithmetic, we want the pupil to develop

such mechanical accuracy in his fundamental operations that when he solves the more complicated problems, he can give his undivided attention to the higher aspects of the work and leave the mechanical aspects of the work to his subconscious self, to habit. In bookkeeping, too, we require the bookkeeper to be unerring and rapid in his ability to decide whether a certain transaction is to be debited or credited. This efficiency will leave his mind free to devote his attention to the more difficult problems.

(5) *Formal Steps of the Recitation.* — In connection with the special method of conducting a recitation, we hear considerably about the so-called formal steps of teaching. There is no room here to consider them at length. The five formal steps are preparation, presentation, comparison, generalization, and application. They are an excellent guide to the teacher in the arrangement of his material, and in calling his attention to the correct principles of teaching which ought to be followed. Thus, preparation calls the teacher's attention to the fact that he must base all his new knowledge upon what the pupil already knows, that he must prepare the pupil's mind to receive the new by gathering up the related old knowledge. Presentation, comparison, and generalization call the teacher's attention to the fact that he must use the inductive method in developing the principle. Application calls the teacher's attention to the necessity of practice and drill.

As an illustration of the five formal steps, we may take the lesson on posting from the Cash Book. The preparation element would be the journalizing of the Cash Book items and the review of the method of posting from the Journal. The presentation would be the giving of the items as they appear in the Cash Book, and the statement of the problem :

How to post. Comparison would involve the comparison of the items in the Cash Book with the place in which they would appear in the Journal and in the Ledger. This would lead to the generalization that the posting items on the debit side of the Cash Book are credit items in the Ledger, and the posting items on the credit side of the Cash Book are debit items in the Ledger. After this generalization, the student is ready to post directly from the Cash Book without the necessity of first transforming the Cash Book item into a Journal entry. This is the application or drill step.

While the formal steps are important, they must not be slavishly followed. We must not try to fit our lesson into a Procrustean bed. As long as the formal steps help in the development of the lesson, they are to be used; but if we make them the master instead of the servant, we paralyze our own efforts. It may be that certain lessons require the presentation stage before the preparation stage; it may be that certain other lessons require a little application before generalization. The teachers will have to decide the particular fitness of the steps to the lesson in hand. There are certain lessons, however, in which the attempt to fit the development of the subject into the formal steps is a failure. This is true of those subjects in which application or drill is the most prominent part. The purpose of the formal steps, principally, is to call the attention to the necessity of developing the rule in a rational manner so that it can be intelligently applied. Where the ordinary application of the rule is easy, because the rule is simple, the formal steps are of no use. This is true of the habit subjects. In a subject like Commercial Law, too, the application stage is the most important, and to give equal attention to the other four steps is a waste of time. Nevertheless, one principle must not be lost sight of even here, and

that is, that we must begin with the concrete fact, and lead the pupil to see the necessity of the rule.

We may generalize on the subject of the formal steps by saying that where the subject is of a scientific nature, the formal steps are of great help; where the subject is one involving technique or habit, the formal steps are of little value.

Further illustration of the principles of teaching as applied to the different subjects will be treated in connection with the separate subjects. But one principle which has been heralded as something new, especially by certain teachers of bookkeeping and stenography, must be mentioned in closing this chapter: individual instruction.

(6) *Individual Instruction and its Limitations.* — The class method of instruction, — by which we mean the method whereby the teacher instructs all the pupils in his class as a body, — while it has great advantages in the way of economy and efficiency, also has serious disadvantages. First, it emphasizes the subject to be taught rather than the individual instructed; secondly, it leaves out of consideration certain individual differences in ability of students in the class. Where the latter have been absent, or have entered school late, there is little opportunity for them to adapt themselves to the work in hand, so as to make up their loss. The consequence is a serious waste of time. For this reason the demand has arisen in our school for some form of individual instruction, some method by which the subject to be taught may be adapted to the needs and abilities of the individual students. While our system of grading takes into consideration the degree of attainment of the members of the class, it loses sight of the fact that certain individuals, starting at the same level, may, nevertheless, progress at different rates; and that after a few months we may find some students be-

hind others, owing to absence, illness, slowness, or other causes.

To remedy these defects, it has been proposed to adopt a method of instruction, which, for want of a better term, we may call "the individual method of instruction." This method is largely in use in business schools, especially in connection with the subjects of bookkeeping and stenography. Those who have adopted it have done so for practical reasons. They have been compelled to admit students at various times during the year; so that the class method of instruction has become, if not impossible, at least prohibitive, because it required the organization of a new class for every small group of entering pupils. Paradoxically, therefore, we might say, they have adopted a method which increases, to a still larger extent, the number of classes, by making each entering pupil a class in himself.

Unfortunately, this method has resulted, not in the organization of a method of individual instruction, but in the establishment of a system in which the teacher does little except check up the work of the pupils. It has its advantages in stimulating the self-activity of the pupils, but it gives no opportunity for good teaching, as such. It is impossible to expect the teacher to give a model lesson to each pupil. Such a method would involve a tremendous waste of time and energy. Consequently, the other extreme is adopted, and no instruction, in the technical sense, is given at all; the instruction given being merely a form of study, under supervision, with occasional oral recitation, such as is found in the ungraded country school.

Such a method of individual instruction is a sham and delusion. It allows no opportunity for the coöperation of class and pupils for the development of a topic, little opportunity for emulation, and no opportunity for one pupil to

learn by the mistakes of others. It is almost criminal, therefore, for a teacher deliberately to abandon the class method of instruction and resort to the method of making each individual a class by himself.

The disadvantages of class-room instruction, however, must be met; and the question arises whether there is any way by which the good of class-room work may be preserved and the evil features eliminated. There is such a method — the so-called “group system of instruction.” It is possible for a teacher to organize his class into two or three groups so as to allow for the different rates of progress, and for their loss of work owing to absence and other causes. In such a system, one group should be instructed with all the methods and devices of the skilful teacher, while the other group should be studying and applying the lessons taught. During the next lesson, the groups would shift, the studying group being instructed while the group instructed before would be studying. If the objection is made that two or even three groups will not allow for a sufficient adaptation to individual abilities of students, it must be said, on the other hand, that some incentive should be furnished the students to accelerate the rate of their progress, and this individual instruction does *not* and group teaching *does* give. If pupils can progress at any rate they please, and if no standard is set which they must attain in a given time, they will exert no effort. In the group method the slower pupils will make a special effort to get into the higher group, and if the backward pupils are even slower than the slowest group, they can be shifted into the highest group of the class below, or given individual instruction after the regular hours. The group system, then, to sum up, combines all the advantages of class-room instruction with the advantages of individual instruction.

SUMMARY

The purpose of this chapter is to show how the general principles of teaching have their particular application in the teaching of commercial subjects. The following principles are considered :

(1) Teachers' knowledge of the subject. A teacher must have a broad knowledge of the scientific and cultural background of the subject he is teaching. He must constantly supplement his knowledge by reading along the lines of the latest advances in the subject, and take advantage of post-graduate or extension courses.

(2) Principle of self-activity. Teaching consists not in lecturing, but in stimulating students to effort and self-activity. The teacher should lead pupils to master problems by their own effort.

(3) Interest and purpose. The realization by the student of the purpose of what he is doing leads to the elimination of much effort. In general, no new topic should be introduced by the teacher without making the student feel that it satisfies a definitely felt need.

(4) In general, the abstract rule should be developed from the study of concrete examples, and the apperception of the pupils kept in mind.

(5) Drill and habit formation. Drill is of very great importance in making the results of the lesson permanent. It is of especial importance in technical subjects like stenography and typewriting.

(6) The formal steps of teaching, as presented by the Herbartian school, are of value as a guide to the technique of lessons in which the aim is the development of the principle. They are of little use in subjects in which the drill phase pre-

dominates, like typewriting, or in which the aim is the development of appreciation of a topic as a whole, like English or history.

(7) Individual instruction in a class has its uses in connection with backward pupils, but it should not be made an excuse for no class teaching at all. The group system combines all the advantages of class-room instruction with the advantages of individual instruction.

EXERCISES

GROUP ONE

1. Why is it not sufficient to study general principles of method in order to insure success in teaching commercial subjects?
2. Outline the knowledge of his subject which you would expect of the commercial teacher. How can he keep his knowledge up to date?
3. Explain the importance of the principle of self-activity, illustrating by reference to both a technical and an intellectual subject of the commercial curriculum.
4. Illustrate what is meant by proceeding from the concrete to the abstract in (a) commercial geography, (b) stenography, (c) economics, (d) business practice.
5. In which subjects of the commercial course is the element of habit formation most prominent? Give the steps in habit formation.
6. What is meant by the formal steps of teaching? Illustrate by means of a lesson in bookkeeping.
7. What are the uses and abuses of individual instruction?
8. Differentiate between induction and deduction. Show that the teaching process involves both induction and deduction.

GROUP TWO

1. Prepare a bibliography on methods of teaching the various subjects included in the commercial high school. In a brief sentence, state the value of each reference.
2. Arrange a summary of the principles of pedagogy which should

prove of aid to the young teacher in the preparation of his daily lessons and in the conduct of his recitations.

3. Write out a criticism of a lesson in bookkeeping which you have observed, basing your comments upon the principles presented in this chapter.

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PART TWO

SPECIAL METHODS IN COMMERCIAL EDUCATION

CHAPTER IV

BUSINESS ARITHMETIC

IMPORTANCE AND DIFFICULTIES

It is scarcely necessary to explain the importance of a knowledge of arithmetic to the business man. It does, however, require some explanation why we should include it in the curriculum of the secondary school after an eight years' course in the elementary grades. There are at least two narrowly practical reasons for this: (1) The constant complaint of business men that graduates of the elementary school are deficient both in performing simple operations, as well as in ability to apply their knowledge to the solution of practical problems that arise in the office; (2) this deficiency tends to hamper the teacher of those business subjects which involve arithmetical operations. These two reasons might, of course, prompt us to seek a remedy in the direction of improving the elementary school course, and this is being done in most of our large cities. On the other hand, the teacher in the secondary school must face the situation as he finds it, and try to supply some of the deficiencies. This involves the inclusion of business arithmetic in the secondary course.

There still remain several specific reasons why commercial arithmetic could legitimately find a place in our course, even if the results in the elementary schools were proportionate to the effort expended. Business arithmetic is, in a sense, a vocational subject. In its treatment in the commercial school, correlation with business practice, bookkeeping and accounting, is constantly kept in mind. The point of view is, therefore, more advanced than that in the elementary schools. Moreover, the teacher profits, or ought to profit, by the student's knowledge of algebra, in order to give the principles that are learned a more rational, a more scientific foundation.

To get the proper perspective of the subject in connection with secondary school work, and to solve some of the problems of method, we must consider some of the deficiencies as revealed by the failures of elementary school graduates. These are lack of accuracy in the fundamental operations and fractions, and inability of the students to apply their knowledge to practical problems that require some reasoning. We might add lack of speed as another element in the deficiency, but this point is not so vital as the other two. Our commercial teachers, realizing this deficiency, take the attitude that the way to supply the deficiency is to give more work in arithmetic. If eight years of a study are not enough to turn out efficient students, perhaps one or two extra years in the high school will repair the deficiency. Instead of examining where the shoe pinches, — whence the failure in the elementary school proceeds, — they serenely pursue their own way, pretty much along the lines of the teacher in the elementary school. This, we believe, is not the proper way to meet the situation. We must examine into the probable causes of failure of the elementary school course in order to

gain some useful lessons in how to do, or perhaps not to do, the work in the high school.

PROBABLE CAUSES OF FAILURE. (1) **The curriculum in the elementary school covers too much ground.** — The industrial and commercial applications of arithmetic form a large part of the content of the work. Many of the topics are entirely too complex for the student. They involve a certain knowledge of business procedure and technique, which the limited amount of time at the disposal of the elementary school teacher makes it impossible to give to the student. The apparent inability of the children to perform business problems that require reasoning is due to the fact that they really have not had sufficient opportunity to exercise their ability on problems that are within the level of their knowledge and experience. There is, therefore, a second cause which grows out of this first.

(2) **Lack of practical work on the level of the experience of the child.** — If we want to teach children how to think, we must give them exercise in thinking. We may find them solving problems that involve a high degree of reasoning ability, and yet we may not be certain that they really have the ability to reason in arithmetic. Many problems in both discount or profit and loss, for example, children may work mechanically or by guesswork, without really understanding the reason back of their work. Even if they superficially understand the reason, they may forget it after a while, simply because they are working in a field of business technique, with which they are not sufficiently acquainted. Consequently, they cannot retain what they have learned. It is a well-known fact that a subject which is well thought out will be remembered without any effort, and even if it is forgotten, it will be possible to recall it with very little review. Rules connected with higher phases of commercial arithmetic, such

as foreign exchange or investments, may be taught with comparatively little expenditure of effort, but the results will be superficial.

When we say that there is a lack of practical problems in the elementary school, we mean, therefore, that the problems are not such as will stimulate the child's thought, as will make him feel a sufficient interest in his work, as will make him see that he is meeting or satisfying a real difficulty which he feels. If our elementary schools devoted less attention to commercial arithmetic, or rather chose a few topics in it, and included a few more problems dealing with the experience of children, in connection with their games and with geography and science, they would really develop the ability of the children to attack arithmetical problems.¹

(3) **Insufficient drill.** — The fault is again a consequence of attempting to cover too much ground. Our schools have done a considerable amount of work in mental arithmetic, so-called, but they have failed, in a great many cases, to give students accuracy and rapidity in the fundamental operations. This deficiency is so evident to the commercial school that rapid calculation drills play a very important part in the ordinary course in commercial arithmetic in the secondary school. Perhaps the lack of proficiency in this respect is also due to the fact that teachers have tried to combine a training in rapid calculation with the study of a process in arithmetic. For example, in presenting a new case in arithmetic, they have very frequently used complex figures for the purpose of "killing two birds with one stone," — namely, to teach the new case, and give incidental drill at the same time. The result was that the attention of the children was divided. It is a well-known axiom among the most advanced teachers of

¹ See bibliographical note at end of chapter.

arithmetic, that the new principle should be presented through the medium of round figures or simple figures. The use of unusual numbers and large fractions distracts the attention of the student from the process involved. It therefore gives training neither in the process nor does it give drill in the fundamentals.

Conclusion. (1) **We must limit the ground to be covered both in the elementary school and in the secondary school.**— It is very true that applied problems are of the highest importance, but if an intelligent understanding of the applied problem requires an elaborate explanation of phases of business that are of a specialized nature, the topic does not belong to the course. For example, a certain real estate problem involving the laying out of ground into lots may involve very useful applications of a principle, but its consideration may divert the attention of the pupils, and the comprehension of the problem may involve a discussion of certain practical phases that the limited time will not allow. If time is taken for this purpose, it necessarily means that more essential topics have to be neglected. The student who has been taught how to attack problems, — to whom difficulties have been presented in a graded form, adapted to the growth of his intelligence, — will be able to adjust himself to the particular situation, when he actually comes to it in his business career.

It may be interesting in this connection to consider Dr. F. M. McMurry's rules for the elimination of topics in arithmetic so as to meet the difficulty due to the attempt to cover too much ground. He considers that the following ought to be eliminated from the course :

(a) Whatever does not answer some ethical, æsthetic, or utilitarian need of the child ;

(b) Whatever does not reasonably fall within the comprehension of the child ;

(c) Whatever does not appeal to the interest of the child unless it conflicts with "a," above ;

(d) Whatever is isolated, irrelevant, or does not form one of a series of related facts.

To adapt these tests for elimination to the secondary commercial course, we must bear in mind the vocational character of the arithmetic taught in the secondary school. We must remember that the subject is not taught as an end in itself, but rather grows out of the need of meeting the various business situations as they arise, in so far as they involve the measurement of value. Teachers have therefore met the situation in arithmetic, — so far as training the student in the ability to reason is concerned, — from the wrong end. They have made business practice incidental to arithmetic, instead of using arithmetic as an aid in the understanding of business processes. The course in commercial arithmetic has been abstract and unrelated to real business life, because abstract mathematical phases have been made too prominent. In the elementary school this difficulty is to a large extent insurmountable, in view of the technical knowledge of business which advanced commercial arithmetic presupposes. The same thing might apply in the high school, if current practice were to continue to include all arithmetic in the first year of the course. In this way, elaborate preparation is made for advanced business practice that is to follow, instead of correlating more directly the arithmetic to be taught with bookkeeping, accounting, and economics.

While a certain amount of arithmetic ought to be included in the first year, there are certain portions that should be reserved for the time when students are familiar with algebra

and when they have a greater acquaintance with business practice. This is in accord with a very important principle in pedagogy, namely, that, as a general rule, no topic should be presented until a need is felt for it. Carried to an extreme, this doctrine would direct us to learn how to discount a note when we actually have to do so in our work in bookkeeping. It is not necessary to hold this doctrine in its extreme form. Nevertheless, it points to this very valuable principle, that when a certain topic, such as bank discount, is studied in the first year, only its simplest phases should be considered. A review of the topic in connection with bookkeeping will not be time wasted, because the solution of the arithmetical problem, even when it is a little more advanced than the one attacked the year before, will be taken up with an interest that will grow out of the realization of the practical value of the subject.

(2) **Perfection in skill.** — There is a second phase of the subject of commercial arithmetic that, as we noted, prompted us to include it in the secondary school course, and that is the perfecting of the student in arithmetical skill to manipulate figures. It is true that calculating machines and arithmetical tables have eliminated a great deal of the abstract arithmetic work, but calculating machines are not of such universal use as to dispense with the necessity of skill in operations on the part of the student. The invention of the typewriter has not dispensed with the necessity of a good handwriting, and neither has the calculating machine dispensed with the need of rapid and accurate figuring. Arithmetical skill is developed by intelligent drill. The principles of conducting drill work and of developing good calculators are so important, that some mention should be made of the subject here. Ability to add, subtract, multiply, and divide accurately is a matter of practice or habit formation. The

teacher who wishes to solve the problem must face certain practical difficulties: (a) How to carry over the skill which is developed in abstract work, to practical problems. (b) How to make the drill interesting. This is important, not only for its own sake, but because mechanical drill which lacks interest is very exhausting. (c) How to develop speed without sacrificing accuracy. (d) How to give short cuts which the student will use intelligently, and which he will remember. These problems will all be attacked in the next section.

Development of Arithmetical Skill. — Skill, as was mentioned before, is connected with the mechanical phase of the subject. In this section of our treatment we shall consider means by which the secondary school can supply the deficiency of the elementary school in this respect. While we have mentioned this deficiency as second to that of inability of the student to apply principles, we are taking it up first. There are two divergent views with regard to the place of abstract drill work in arithmetic. One is the older view which insists that technical accuracy should be developed in connection with abstract work, and that only when this accuracy exists is it wise to solve applied problems. The more modern view is that drill work should never be apart from more practical use. The advocates of this view say that abstract work arouses no interest in the mind of the pupil, it is unrelated to his other work, and satisfies no need. According to this view, then, abstract drill work should never be conducted apart from some practical or useful problem.

There is some truth in both of these views. It is undoubtedly true that mere abstract drill work is uninteresting and fatiguing, but it is also true that to rely merely upon the incidental drill that is obtained from the solution of practical problems is to supply only inadequate exercise to the student.

In the first place, a problem in which the attention is divided between work in reasoning and work in numerical drill fails completely to train either the ability to reason or the ability to manipulate figures. Some mechanical drill work should undoubtedly be conducted, so that when the students tackle a problem requiring analysis, the manipulation of the number work is automatic and the mind is left free to analyze, without being distracted by complex figures.

There is, therefore, a middle view between the two extremes, which accepts abstract drill work as a necessity, but tries to make it as interesting, stimulating, and as useful as possible. We shall now answer some of the problems connected with drill, which were propounded in the preceding section.

(a) *How to carry over the Skill obtained from Drill Work to Practical Problems.* — The contention of those who are opposed, in general, to mere formal work, is that the facility gained from formal work is not carried over to the handling of practical problems. This is scarcely true, except where other elements apart from the formal phase are involved in the problem. Thus, if a person has learned how to add a column of figures accurately and quickly, he will carry over this ability to an applied problem. Of course, if he does not know that the problem proposed to him is one which involves addition of a column of figures, that is, where the figures involve an arrangement of two columns, such as debit and credit, his skill in addition will be of no avail, because he will not have the opportunity to exercise it. This precaution, however, we must take as a note of warning from those opposed to formal drill. Our abstract work must be of such a nature as is commonly met with in real business life. Thus, addition drill is frequently limited to the addition of a column of figures in which each line has the same number of digits. In

bookkeeping we invariably have occasion to add amounts which vary in the number of their figures. This kind of work should, therefore, have its place in the drill work. Practice in horizontal addition should also be included, because there are so many practical uses of this kind of addition. Again it may be that occasionally a student is required to add fractions with very large denominators. Practically, however, skill in manipulating common fractions with large denominators is of very little value, and the time spent in drill work of this sort is wasted. When the opportunity arises to add two of these unusual fractions, the practical calculator reduces them to decimal fractions first, and then accomplishes his addition with ease.

(b) *How to make the Drill Work Interesting.* — As we have remarked before, long-continued drill is exhausting and uninteresting. But for a short time, the student finds abstract work interesting enough for its own sake, regardless of the ultimate purpose to which, in his mind, it may or may not lead. The problem before the teacher is how to sustain this interest long enough, to postpone the feeling of weariness that will arise if the drill is too long continued. In written work, such incentives as the setting of a time limit, the arousing of emulation by the organization of rapid calculation clubs or classes, may be of some effect. The introduction of some purposeful end may also help in this regard. If the student, for example, feels that his column of figures represents a total which stands for some definite fact, like the total volume of foreign commerce of the United States, his work will be of some interest to him, beyond the mere calculation phase, because he will be interested in the result from another point of view.

But after all that is said, we must avoid abstract drill that is sustained too long. Perhaps the wisest plan is to

have both short oral and written drill work in connection with each lesson. As for devices which will add to the interest of oral or mental arithmetic, those devices which have proved interesting in the elementary school may be adopted in the secondary school as well. The arrangement of the figures, integers as well as of fractions, upon the blackboard, in the form of a dial plate of a clock, or on the rungs of a step-ladder, or on the ties of a railroad track, tend both to add interest in the work and to save time. The saving of time consists in the fact that the figures do not have to be read, but merely have to be pointed out on the board, and the answer follows.

(c) *How to obtain Speed without sacrificing Accuracy.* — All business men realize that accuracy, above all, is essential in arithmetical work. One mistake in the addition of a column of figures may not be very material if the error is in the units' place, but if the mistake is in the thousands' place, it is very serious. Teachers should reject any answers in abstract work which are not absolutely accurate. But how about speed? This is undoubtedly desirable, and after reasonable accuracy has been cultivated, efforts may be made to increase the speed. The attempt to force speed too early leads to the development of slipshod work. One of the ways in which speed is very often checked is by the habit into which the pupil has got, to read or whisper the separate numbers in his examples. He should be taught to add two figures not by pronouncing them separately and then stating their sum, but by giving the sum of the two immediately after glancing at them.

(d) *How to give Short Cuts which the Student will use intelligently and which he will Remember.* — The first commercial education given in this country was by itinerant teachers, who stopped at various places from time to time, and offered instruction in penmanship and in short cuts in arithmetic.

It is reported of these pioneers, that they were wont to startle their audience by apparently phenomenal speed in addition, multiplication, and division. They would thereupon proceed to take enrolments for a course which would give the facility the audience had just marvelled at. Needless to say, these tricks — for such they were — were soon forgotten.

One who would seek a superficial reason for this forgetting, would say that there was not enough opportunity to review the short cuts. A thing which we have very little use for we soon forget, and when the occasion arises when we need this particular bit of forgotten knowledge, it is not available. Therefore, one might say, review subjects constantly, even though you have no immediate use for them, because a later occasion might arise when they might come in very handy.

We believe that this remedy is very inadequate. The reason why short cuts are forgotten is because there is no rational foundation for them. They are remembered as a mere device. The advantage of understanding the mathematical principle upon which a short cut is based, is that it helps us to reproduce the device whenever we require it. We need not therefore be afraid of forgetting the short cut just as long as we remember the principle back of it; and the latter is not very apt to be forgotten so soon, because it has been apprehended by the reason and not by the mechanical memory. What is this rational foundation back of the short cut? It is the principles of algebra.

There is a general idea which rarely takes definite shape in the minds of most persons, that somehow or other a study of algebra enables us to understand our arithmetic very much better. But many a student is disappointed when he finds that the connection is not direct enough, and that he is unable to apply his newly derived knowledge of algebra to his arith-

metrical problems. Hence he very often wrongly infers that the study has been so much waste of time. His impression, it is needless to say, is due to poor teaching of the subject and the failure of the text-book constantly to make the connection between algebra and arithmetic clear. The old-time algebra (and some contemporary text-books are no exception) presents a number of unpractical examples, and rarely builds a bridge between the algebraic process and the related arithmetical process which is really based upon it.

We have recommended the introduction of algebra in the course during the first year. We might go so far as to make algebra and arithmetic a part of the same course, were it not for the fact that arithmetic includes so many phases of business practice, that the commercial teacher ought, properly, to handle it, rather than the teacher of mathematics. But the teacher of algebra should constantly give application of principles to the solution of arithmetical problems, regardless of the fact that pupils are studying arithmetic in another class; and the teacher of arithmetic should not hesitate to use algebra as an aid in his work. It is one of the few bad effects of specialization in teaching that the specialist in one subject considers work belonging to another subject outside of his province. Whatever may be said about this attitude, there should be a distinct effort toward coöperation and correlation, where two branches are so closely related.¹

Let us see how algebra aids the student in establishing a rational foundation for his short cuts. We have room only for a few examples. In order to multiply 52 by 48 we use this short cut: Take the square of 50 and subtract from it the square of 2 (which is the number by which 52 and 48

¹ Compare what is said on the subject of correlation between the departments of stenography and English on page 387.

respectively differ from 50), or subtract 4 from 2500, and the result is 2496. This short cut is based upon the formula $(a + b)(a - b) = a^2 - b^2$. The teacher of algebra should apply this formula to a great many arithmetical examples; and, similarly, we expect the teacher of arithmetic, when he comes to the topic of short cuts in multiplication, to familiarize himself with, and to refer to, the algebraic formula. Again, if we have to multiply a series of numbers by the same number, and add the result, algebra teaches us that the shortest way is to find the sum of the different numbers in the series, and multiply it by the common number. The formula here is $ab + ac + ad = a(b + c + d)$, therefore, $25 \times 34 + 25 \times 45 + 25 \times 18 = 25(34 + 45 + 18) = 25 \times 97 = 2425$.

More will be said below on the subject of the importance of the aid of algebra in the solution of difficult arithmetical problems.

Artificial Aids to Calculation. — The ingenuity of man has invented many devices for making the task of calculation easy and unerring. Arithmetical tables, slide rules, and calculating machines have been devised, and they have come into very extensive use in business. The teaching of the use of calculating machines is probably the function of the business practice course, but the use of tables, such as multiplication tables, simple and compound interest tables, wage tables, etc., should be taught by the teacher of commercial arithmetic. And some account of the underlying principle on which the table was constructed should be given to the student, so that he will be able to use it intelligently, instead of automatically. The teaching of the use of tables probably belongs to the advanced course in business arithmetic, because it presupposes quite some knowledge of algebra. The slide rule, for example, a device for making multiplication and

division easy, is based upon the principle of logarithms; the intelligent understanding of a compound interest table also involves a knowledge of algebra. Of course all these tables can be taught mechanically without algebra.

Special Drill Class. — Those who still insist that a considerable amount of time in the course should be devoted to mechanical drill work, because a proportion of the students show a deficiency in that respect, fail to take a correct point of view regarding the remedy. If the rational drill work recommended still fails to reach a number of the students, the remedy is not to inflict more mechanical drill upon the class as a whole, but to organize the deficient pupils in special supplementary classes. It is wrong to inflict a lot of mechanical work upon an entire class, because a few show a deficiency in the manipulation of figures. This special drill class would be outside of, and supplementary to, the regular class work, and not a part of the regular curriculum. A similar principle should prevail in penmanship. Even if as many as one-half of the pupils show marked defects in penmanship, it is no reason for putting in more work in penmanship as a regular part of the curriculum. The deficient pupils should do supplementary work of a nature analogous to that of the deficient pupils in arithmetic.

Applications of Algebra to Arithmetic. — There is no more difficult subject in arithmetic for the teacher than the teaching of so-called “reading problems.” Many practical devices have been used by the teacher, some of which have been very effective. The method of requiring an approximate answer, or at least the denomination in which the answer will be, is very useful because it avoids some of the ridiculous errors which pupils make. Another device that is very commonly used is to require each pupil to analyze the problem by asking

himself what is given and what is to be found. It would be better to reverse the order in which these questions are asked, by requiring him to tell what is to be found first, and then to put the question, What is given which will help us find it?

Another device which we have not seen suggested in any text is to require pupils to construct their own problems and to solve them. This will be of great advantage in bringing business practice and arithmetic in closer relation, because the problems the pupils will construct will have to stand the test of probability. If they present grotesque figures or untrue business situations, their problems will have to be rejected; and criticism along these lines of some of the problems brought in by pupils will be of considerable value. In this way, we believe the pupil will have a better realization of the meaning of the problem — because he will have had a part in the making of it — than if a problem is presented to him ready-made.

But the most important aid to the solution of applied problems is algebraic analysis. By the use of algebra, some of the most difficult arithmetical problems are made ridiculously easy. It is almost a crime to compel students to go through cumbersome arithmetical analysis in order to solve their problems, when algebra points an easy way. The following are some of the applications:

(1) x . — The use of x as the number to be found enables us to convert all indirect cases of percentage to direct cases. Thus, to find the cost, having given the gain or loss: If we call x the cost, we can apply the basic rule used in the direct case of profit and loss; namely, multiplying the cost (x) by the rate of gain or loss to find the actual gain or loss. This points to the most valuable application of algebra to arithme-

tic, — the ability which it gives to consolidate all the cases of percentage into a single case, with the consequent saving of the memory. This point we shall consider in connection with the use of formulas.

But before doing so, we wish to show difficulties the teacher of arithmetic has to solve in indirect cases of percentage by means of arithmetical analysis, and the confusion which such an attempt is apt to cause in the pupils' minds. Thus, we call the cost 100%, which it actually is not, when we might just as well call it x . We add the rate of gain, say 25%, and call the selling price 125%. But our difficulty only begins now, when we say that 125% equals \$250.00, and 1% equals $\frac{1}{125}$ of \$250.00. The pupil is liable to think that it ought to equal 1% of \$250.00. The method of arithmetical analysis thus causes confusion in his mind. Algebraically, he will solve the problem by putting down an equation $x - \frac{1}{4}x = \$250.00$. As he has learned how to clear of fractions, he will solve the problem with the utmost ease.

(2) *Formulas.* — The use of formulas is the greatest labor-saving device in calculation. Formulas are extensively used not only in pure mathematics, but in technical work, and even in accounting. After all, the formula is only an abbreviated statement of a rule. It has this advantage, moreover, that this abbreviated statement can be manipulated by means of algebraic processes. Thus, we may take the formula for simple interest, and manipulate it so as to derive all the indirect cases. The advantage lies in the fact that only one rule will have to be remembered, instead of four or five. To illustrate: The rule is: Interest equals principal times the rate times the time. Stating this rule as a formula by using letters alone, we have the formula, $I = P \times R \times T$, or $I = PRT$. This formula can be used for all

cases of interest. If we wish to find the principal, having given the other elements, we substitute in the formula for I , R , and T , and solve for P .

The skilful handling of formulas requires the following practice: — First, training in numerical substitution in algebraic expressions, — training which the algebra teachers should devote special attention to; and secondly, practice in using other letters for the unknown number besides x , such as a , m , n , or p .

APPLIED BUSINESS PROBLEMS

We have indicated the vocational aim of business arithmetic in the secondary school. One of these aims is attained when the pupil has acquired skill to manipulate figures, and has become acquainted with all the artificial aids to accurate and rapid calculation. But there is another and perhaps even more important phase of arithmetic, and that is, its application to the solution of practical business problems. We have seen that one of the serious deficiencies of the elementary school graduate is his inability to solve these applied problems. Some of the methods of attacking such problems were indicated in the preceding section. Perhaps a more definite analysis of some of the reasons for the student's inability to reason out some of the problems may not be out of place here, even though some of the reasons have already been indicated. In discussing the sickness, it may not be inappropriate to indicate the remedy.

(1) The problem work in arithmetic is not sufficiently an outgrowth of the business activities of the student. As we said before, we will not be wrong if in this branch of the work we make the commercial activity phase (of which the example

is an outgrowth), primary, and the arithmetical part, secondary.¹ A very important aid in this direction is the insistence upon a certain amount of numerical work, with emphasis upon the arithmetical phase of the work in such subjects as bookkeeping, civics, or economics. An example in discount which the student solves, because he is confronted with the bookkeeping problem of a customer who has discounted his bill and whom he wants to know how much to credit with, — such a problem will appear real to the student. The little digression from the bookkeeping work, which a little explanation of the arithmetical phase of the problem entails, will be decidedly worth while. Similarly, in civics, the students may be given arithmetical exercises in working out the tax rate of a community, based upon given figures of assessed valuation and budget requirements. A student who solves this problem receives training not only in arithmetic, but also in civics.

We can readily see why the opportunities for the close correlation of business activities and arithmetic are limited in the elementary school. The pupil is not mature enough to understand such intricate problems as those of foreign exchange, insurance, etc., — not because he is ignorant of the numerical phases of the work, but because his experience is too limited to apprehend the technical functions, of which the numerical work is a product. Even in the high school, some of these problems have to be postponed to the third year, or at least to a time when the student may have reached the necessary maturity and obtained the prerequisite experience. Empty definitions of business processes in connection with the arithmetic course will not satisfy the requirement which

¹ This point has been strongly emphasized by Dr. Thomas Balliet, Dean of the New York University School of Pedagogy, in his lectures on *Methods in Arithmetic*.

is imposed upon the teacher to bring the arithmetical problems into vital relation with real life. Some notes on how this relation may be made in connection with topics in higher commercial arithmetic we shall give in what follows.

(2) Another reason why the pupil is apparently unable to carry over his ability to solve problems in arithmetic, when the same problems confront him in real business, is because the book problems are frequently so artificial and so out of accord with, not to say contrary to, conditions in business life. A standard example of this kind is the so-called fourth case in commission problems. In this case, the agent is supposed to get a certain sum of money which he is to invest, after he deducts his commission at a certain per cent. Now, this may be good practice in indirect cases of percentage, but as it gives a wrong notion of how business is done, it should not be allowed in the arithmetic, as it will only tend to confuse the mind of the pupil when he handles actual problems in commission, later.

TOPICS IN HIGHER COMMERCIAL ARITHMETIC

(a) *Percentage*. — The reason for mentioning this topic as a branch of business arithmetic is because most of the fractions in business examples are in the form of per cents. Besides, the calculation of percentage, apart from the standard commercial applications, such as discount, interest, etc., is a necessary requirement in the construction of graphs. A graphic comparison of different volumes of product requires a reduction of the figures to scale. This can best be done by reducing the figures to a percentage basis, and constructing the table from these percentages. The teaching of percentage, as such, involves absolutely nothing new, except the form of

writing. If the teacher emphasized the fact that a per cent is only another form of writing a decimal with two places, he would eliminate most of the difficulties connected with percentage. If he further shows the importance of having a common denominator for all fractions, for purposes of comparing their magnitude, he will bring out the economy of reducing every fraction to a decimal of two places, because then he will only have to compare the numerators in order to determine relative magnitudes of fractions. Thus, how many can tell at a glance which is larger, $\frac{24}{73}$ or $\frac{25}{74}$? As soon as we reduce the two fractions to a percentage form, we find that the first is 33 % and the second 34 %, and instantly we can make our decision.

(b) *Profit and Loss*. — The student has some idea of the meaning of trading, and this should be made the basis of the presentation of the topic. The idea of profit as the wage of the man who gets the goods from the manufacturer and stores them until such time as the consumer will need them, should be brought out. Since the term cost is so important in this work, a distinction should be made between first cost, or prime cost, and total cost. This distinction will be emphasized even more in the bookkeeping work. The main purpose of the distinction in its relation to trading is to endow the examples with a certain amount of interest and relation to practical life. In some lines of business the selling price is made the base, but this method is unscientific and really unbusinesslike. However, in compliance with the growing practice in the jobbing and retail trade to base the rate on the selling price, the teacher might assign problems in which this base is used, but only after the class is well grounded in the other method. Shall we consider the indirect cases of the subject? Certainly, the problem of finding the per cent

gained as distinguished from the actual amount gained is not one which satisfies mere idle curiosity. For example, the man who gains \$1000.00 on his sales may be in a good condition, while the man who gains \$10,000.00 may be on the verge of bankruptcy. The only way to tell is to find what per cent the gain is of the total cost. The indirect case in which the selling price is given and we are asked to find the cost is of very little value, except to enable a person to figure approximately what an article selling at a certain price in a rival store must have cost, assuming a certain per cent of profit. The most important example from a business point of view is to find what I must sell a given article for in order to gain a certain per cent on the total cost; and this problem is only an application of the direct case.

(c) *Commission*. — This topic should also be introduced by a short presentation of the work of the commission merchant and agent, and the work he does for the community. The reward for his services may be a salary, but more commonly it is a percentage on sales, as an incentive for greater effort on his part. In addition to the usual problems on the subject, the teacher should give the student the opportunity to make an Account Sales rendered by the agent, using the data of a given example. The so-called fourth case of commission, which presents problems in which the amount sent to the agent is stated, including both his commission and the amount of the investment, should not be taught at all, because it is contrary to business practice. The finding of the total sales from the rate and the commission may be of value, because it may satisfy the desire of the merchant to know the total volume of business done by an agent, taking as a basis commissions paid to him and the rate.

(d) *Trade Discount*. — The reasons for granting discount

should be discussed, as, for example, special concessions to customers for buying large quantities, for paying cash, etc. The reason for two or three trade discounts may thus be brought out. The reason for artificial catalogue or list price should also be considered. The indirect case — what must I mark a certain article in order to be able to grant a certain discount? — may also be taught, even though it may reveal a business practice of doubtful integrity. Thus, it may show that certain merchants are in the habit of marking their goods up, so as to be able to pretend that they are granting a price concession.

(e) *Interest*. — The motive for interest should be developed from a concrete instance of money lent; the use to which the borrower can put the money; the deprivation the lender suffers and the risk he assumes. Hence, the latter is entitled to compensation. The borrower pays for the benefit he derives, and the lender is paid for his deprivation and risk. The time element naturally becomes material, because the longer the period of respective benefit or deprivation, the greater the amount paid. An elementary discussion of the legal rate and the term usury should also be included. Of course, this subject is also considered in law and economics later on, but an elementary discussion here is a good preparation for the advanced subjects. The teacher should not omit to take advantage of a practical lesson which he can give to the students on the inverse relation between a high rate of interest and the safety of an investment.

In connection with methods of computing interest, the basic method — multiplying the principal by the rate and the time in years, in order to find the interest — should be given first. It establishes the rational foundation for all the other methods, and besides, the others are only short cuts of this.

Again, the purpose is very conveniently stated in a formula, and this formula is very useful in solving all the indirect cases of interest. With regard to short-cut methods for practical calculation, the sixty-day method is the most important, because it is the one most convenient for bankers, — but there is no particular reason for insisting upon one method. If the student has an intelligent understanding of the rational foundation of the short cut he uses, there is no objection to his using it.

(f) *Bank Discount*. — The motive here is arrived at by considering the needs of the manufacturer, who has to pay out cash on account of goods he is manufacturing, in the form of rent, labor, etc., before he receives any money for those goods, and sometimes even before he has sold them. The function of the bank and the place of credit have to be shown in an elementary way. The manufacturer borrows money from the bank, gives his promissory note, and pays the bank for its accommodation. This payment is the discount which the bank deducts in advance from the amount lent. The instruments of credit should be considered, the student should be given practice in writing out such instruments, and in discounting promissory notes; first, those in which no interest is mentioned, and next, those which are interest bearing. Most of the examples should involve 30-, 60-, and 90-day notes, rather than one-month, two-month, and three-month notes. Those above 90 days are usually expressed in months. There should be some correlation with law, at least to the extent of explaining the meaning of “protest” and the legal effect and the liability of indorsers. The indirect case of bank discount, that is, finding the face when the proceeds are given, should be used only to a limited extent because of its infrequent use in business. It may be important to the customer

who wants to find out for how much he must make a note or draw a bill in order to have a certain amount available. Certain phases of business practice, like the use of the draft for collection purposes, and the bill-of-lading with draft attached, need not be considered in the work in arithmetic.

(g) *Stocks and Bonds*. — This subject is related to the function which the large corporation fulfils in modern life. The student is shown that the carrying out of great enterprises involves large outlay of capital and the necessity for coöperation of many persons. The stock certificate is an evidence of a man's partnership in the enterprise, and his ownership entitles him to profits known as dividends. The terms par value and market value should be carefully distinguished, and reasons given for fluctuations in the price of stock. The broker, his services and compensation, and the function of the stock exchange should also be explained. In connection with the dividend, reasons should be given for computing the rate of return on the par value and ignoring the market value, as the corporation itself is not supposed to be concerned technically with the price which its stock brings in the market.

The most important problem in investments is probably the computing of the rate of return which a certain investment yields, and the making of comparison between the income return of different stocks. Again, the relation between safety and interest return should be emphasized, especially in connection with bonds. Many interesting problems along this line may be given, as, the comparative income return of different railroad bonds, industrial bonds, city bonds, and government bonds. Many interesting generalizations may be drawn from this comparison, but to make the work real, examples should be taken directly from newspapers, using current quotations. It is absurd to take quotations from an

old text-book, that are entirely out of date, and draw any generalizations on the basis of those antiquated figures. As we indicated in the discussion of commercial geography and the technique of commerce, the student should be taught how to use the commercial and financial page of the newspapers, as a valuable source of information. Of course, we must not lose sight of the danger that a student may become interested in stock speculation as such. It is the duty of the teacher to warn the students that large returns cannot be expected without running the risk of large losses, and that safety lies in being conservative and expecting small returns.

(h) *Partial Payments.* — These examples are still included in the course of study, although they are of very little use. Partial payment notes are not very usual in business nowadays, separate notes being given for the amount of each instalment. The reason is that the debtor cannot be absolutely certain that the creditor has indorsed the amount of payment on the note. If he fails to do so, there is a possibility that he may be asked to pay a second time by a stranger to whom the note might be endorsed. The examples given should be confined to applications of the United States rule and the instalments ought to be made payable at regular intervals.

(i) *Compound Interest and its Applications.* — The motive here is the incentive to thrift in leaving interest in the savings bank to draw interest again. Illustrate the possibility of such a scheme, and the result of the accumulation for about thirty years. As a rule, it is a waste of time to solve compound interest problems by the long method. Either compound interest tables should be used, or else problems should be worked by means of the formula and with the aid of logarithms. As the chief applications of compound interest are to such problems as endowment insurance, annuities, and amortiza-

tion, or in other words, to accountancy of investment, the subject can be effectively considered only in connection with the work in advanced algebra and advanced commercial arithmetic. To the one who intends to make accountancy his profession, this phase of the subject will be of the greatest importance.

(j) *Other Applications of Percentage.* — There are two applications of percentage that are very closely connected with government finance, and that may also be reserved for the advanced course in arithmetic.

(1) *Taxes.* — As a matter of fact, the lesson on taxes is just as much a lesson in civics as one in arithmetic, and the teacher of government loses an opportunity for correlation if he fails to include in his course, problems in connection with the budget and assessed valuation. The subject is to be introduced by considering the fact that it costs money to run the various activities of the government. This suggests methods of obtaining the money. In answering the question how much it will cost to run the government, we should take an actual budget, using round figures. Since the property holders pay the expenses of running the government on the basis of what their property is worth, the matter of assessed valuation of the property and the means of arriving at it comes up. The tax rate for the city is determined and the necessity of a uniform rate emphasized. Among the problems to present, the most important are: How much will a certain property have to pay in taxes? What will be the net income of the landlord, after he pays interest charges, taxes, and insurance? Additional problems upon the budget include: What per cent of the city's income is spent upon education? upon the police? upon the streets? Compare these different rates and draw conclusions from this comparison. Figure

out how much your landlord pays upon his property. Out of what money does he pay the taxes? What part of the total rent of the house does your father pay? What part of the total tax does he therefore pay? How much of the rent which he pays is actually contributed to the city government through the agency of the landlord?

(2) *Customs and Duties*. — This topic is also closely correlated with civics. The development would be along the following lines: (a) The necessity of securing money to run the government in Washington. (The necessity for a protective tariff need not be brought in.) (b) The estimated cost of running the government suggests a brief statement of what the United States government does for us. The ordinary study of the three divisions of the government, the terms of congressmen, etc., etc., may be important, but it is too barren for this purpose. Some concrete facts of what the government does for the individual citizens should be noted. A detailed discussion would belong to a separate lesson, but here such topics may be considered as the work of the government for pure food, its help to the farmer, the coining of money, the national defence, the pensions, etc., etc. (c) The tariff schedule—ad valorem duties (specific duties are practically unknown now); the consular invoice. (d) Problems involving duties. Comparison of rates of duties on different articles. Reasons for the difference. (e) Miscellaneous problems, involving duties as an element in the cost of an article.

(k) *Foreign Exchange*. — This topic is so closely connected with economics that an explanation of the entire mechanism of foreign exchange, including such topics as the rate of discount, the gold export point, and related questions, might be left to the course in technique of commerce or applied eco-

nomics. If, at this stage of arithmetical study, the work in that course has been taken up, it may be appropriately reviewed in the advanced commercial arithmetic. Such problems, however, as are connected with the conversion from one money standard into another, and customs and duties problems involving this conversion, as well as that from the metric system to our own system, may appropriately be given. In the technique of commerce course, we expect the student to understand the quotations as they are given in the newspapers, and the work in arithmetic in this connection should aid in this understanding.

The Course of Study. — A brief discussion of this is essential, because our curriculum presupposes two courses: an elementary one in the first year, and an advanced course in the last year. The essential topics to be considered in the entire course have already been mentioned at length. In this connection it will therefore be necessary to treat of the distribution of topics over the two years of the course.

In the first year, we must emphasize drill work in integers, fractions, and denominate numbers, together with their practical applications. Among these are simple industrial problems connected with carpeting, plastering, board measure, etc. It has been suggested that a differentiation in the practical applications ought to be made with classes of girls. Problems connected with domestic art and economy should have an important place in such classes. Simple mensuration should also be taken up in this connection, and not postponed to the time when the entire commercial arithmetic has practically been completed.

The requirements of bookkeeping and business practice will compel us to give the simpler phases of percentage, profit and loss, commission, trade discount, simple interest, and

bank discount, in the second part of the first year. A more elaborate treatment of these topics may be left to the advanced courses.

Should any of the topics enumerated above be considered again in the advanced course in the last year? The best authorities on the teaching of arithmetic are agreed that a spiral course, one in which the work in lower grades is repeated, from a more advanced point of view, in the higher grades, is the most effective. Let us see what basis there is for believing that the effective conditions for spiral repetition exist in the last year. First, there is the larger knowledge of algebra which enables the student to apprehend the principles of numbers, from their scientific foundation. Secondly, there is a large body of business experience that enables the student to take up effectively more difficult commercial applications of percentage. Thirdly, there is a knowledge of geometry which makes possible an intelligent consideration of mensuration problems.

A course in the last year should, therefore, comprise numerical or drill work, with special relation to artificial labor-saving devices, such as tables; a more complete consideration of short cuts than in the first year, with special reference to their algebraic foundation. Besides a more complete treatment of the commercial applications considered in the first year, several other applications of percentage should be taken, such as compound interest, investments, foreign exchange, and taxes and duties. The arithmetic necessary to the accountancy of investment, such as problems in amortization, annuities, etc., should receive special attention. In mensuration, we should include the metric system, together with more difficult industrial applications. In girls' classes, problems connected with the measurement of dress material should receive special attention.

Special Methods. — There is very little to say about special methods in this connection that has not already been said either in Chapter III or in this chapter. In this connection, it will only be necessary to make a few brief remarks. Should the inductive method be used in commercial arithmetic in view of the fact that many of the topics have already been presented in the elementary school? It should be used, by all means, because it is the only concrete approach to the subject, and because it brings out the better relation between the concrete experience of the pupil and the numerical work. Suppose this connection has been shown before? So much the better. The task of building the bridge from the known to the unknown will therefore be very much simpler. The Herbartian formal steps lend themselves very nicely to the presentation of the subject. In the preparation stage we should emphasize *motive* or *purpose*. The stages of presentation and generalization do not involve much effort. The stage of application is perhaps the most important one in connection with drill, from the standpoint of results. We omit detailed consideration of it here, because it has been abundantly covered in the discussion of drill in arithmetic.

We may add a few suggestions on aids and devices in the recitation.

(A) *The Subdivision of Difficulties.* — The teacher is apt to attempt to present too many points at a time, or to make the mistake of presenting problems with unusual figures, the manipulation of which divides the attention. The teacher should have in mind the elimination of this fault.

(B) *The Blackboard.* — If the work in commercial arithmetic is not primarily disciplinary, should the same amount of blackboard work be insisted upon as in other branches of

mathematics? This is a question which is sometimes asked, but we fail to see why only certain subjects should monopolize board operations. We favor a continuous, liberal, and varied use of the board, for two reasons:

(a) the teacher can inspect more work easily, and

(b) students, especially boys, enjoy this kind of exercise. Different problems may be worked by each pupil at one time; and at another those at the blackboard may be divided into groups of three or four, so that though some are at work on the same problem, the temptation to copy is minimized; and sometimes, in drill work, all pupils at the board might work the same problem. If time permits, pupils are to explain their own work, and members of the class encouraged to ask questions. Sometimes it is better for the instructor to explain all or most of the work, because he can cover more ground. The point is, that no fixed form should be adhered to, so as to avoid "falling into a rut."

(C) *Oral Work*.—Much more oral work than the teacher usually finds time for should be planned. The modern text furnishes more examples than the old ones, and some few special booklets are on the market. Every oral recitation should be an exercise in good English, and to this end, a good exercise consists of requiring statements from the pupils as to how problems are to be solved.

(D) *Diagrams*.—We cannot too strongly urge the advisability of utilizing the benefits which come from the illustrations suggested by many of the problems of commercial arithmetic. We see no objection to insisting upon rough sketches for all work in practical measurements. Outside of the aid which such drawings furnish to a better understanding of the problem, and the clearer visualization which such exercise promotes, it is our experience that the boy who shows extreme

signs of mental inertia will be encouraged to analyze examples when he has become accustomed to "draw" them.

(E) *The Text-book.* — Before accepting a text-book, it is necessary to make sure that it includes all that one considers essential; it is easy enough to omit portions. We trust that no teacher will fall into the error of the schoolmaster who tried to teach cube root for no other reason than because it was in the book. Inasmuch as the number of topics is to be reduced, we are enabled to insist upon a larger number of well-selected and well-arranged problems. As we realize that modern arithmetic deals with business, and as it is often difficult to obtain samples of forms referred to by the text, we should select such books as show photographic reproductions of these very forms. The text-book should also give problems that are real, and should eliminate such as are inconsistent with business practice. One other point remains for treatment. It is, whether to use books with or without answers. We are familiar with all the objections against placing answers in the hands of pupils, but their advantage appeals to us so greatly that we feel the abuses they may lead to can be counteracted. But this is a question which may well be left with the teachers themselves.

As to the use of a text-book in arithmetic, very little need be said. The principal uses of the book are: to give drill exercises, and to save time in the dictation of problems, and, in the newer texts, to furnish illustrations of commercial papers and forms not easily obtainable elsewhere. Finally, the good text serves to crystallize the classroom discussion of a topic and affords the best medium for reviews.

(F) *Teacher's Note-book.* — The teacher will find it desirable to set additional problems from time to time. Too often the mistake is made of destroying these, as the occasion which

called them into use has passed away. If, instead, they were placed in a note-book, and answers attached, a surprisingly valuable collection would develop in a short period of time. What has just been said applies with even greater force to examination problems. Again, an important source of additional problems, as we have shown, is the newspaper, and many of the problems derived from this source can also be preserved in the note-book for future use.

(G) *Examination.* — Nothing is more discouraging to the pupils than a bad failure on a test. In arithmetic, formal tests might come as frequently as once a month. If an examination consists of five problems, two of them should be easy enough to insure that almost every member of the class can pass them. The other three should be more difficult so as to call for much higher ability. After all that is said of its disadvantages, the examination in arithmetic is the greatest aid to efficient results. It compels accurate and definite results, and gives the necessary opportunity for training in rapidity of judgment. Besides, the examination in arithmetic is free from the disagreeable feature of cramming, which is one of the most objectionable phases of examinations in most subjects.

OUTLINE INDUCTIVE LESSON IN ARITHMETIC

Topic: Interest

A. *Purpose and Preparation.*

- (1) Motive: The occasions for borrowing money in business life; the use to which the borrowers can put the money, the deprivations the lender suffers, and the consequent compensation to which he is entitled.

- (2) Preparation (General): Definition of interest; elements upon which amount of interest depends; sum lent (principal), time, and rate; reasons for including these elements.
- (3) Preparation (Arithmetical):
1. Call attention of class to the fact that interest is one of the applications of percentage, because the rate is expressed in hundredths.
 2. Have them find 5 % of \$100.00, etc. What is the interest on \$100.00 at 5 % for one year? for one-half year, etc.?
 3. Develop the fact that interest examples are ordinary percentage examples with the element of time added.

B. Presentation.

1. Find the interest on \$1.00 @ 6 % for one year.
Ans. \$.06.
2. Find the interest on \$1.00 @ 6 % for 60 days.
Ans. ($\frac{1}{6}$ of .06). \$.01.
3. Find the interest on \$1.00 @ 6 % for 6 days.
Ans. ($\frac{1}{10}$ of .01). \$.001.
4. Similar problems with principal (base) as multiples of \$1.00.
5. Similar problems with time as multiples of 60 days.
6. Similar problems with time as multiples of 6 days.
7. Similar problems with time as fractional parts of 60 and 6 days.

C. Comparison.

1. The class should notice that in problems of the type

- a. the interest at 6 % on \$200.00 for 60 days is \$2.00.
- b. the interest at 6 % on \$200.00 for 120 days is \$4.00.
- c. the interest at 6 % on \$200.00 for 30 days is \$1.00.
2. That all elements involved are the same except the *time*.
3. a. That the interest changes with the time, and
b. that the interest is easily obtainable from the amount for 60 days.

D. Generalization.

1. To find interest at 6 % for 60 days, point off two places.
2. To find interest at 6 % for 6 days, point off three places.
3. To find interest at 6 % for a different number of days, proceed according to 1 and 2 above, and modify answer.

E. Application.

Problems assigned to drill on principles just taught. In connection with these problems, take up a fuller discussion of such topics as legal rate, usury, risk elements in loans, and comparison of high interest rate with safety of an investment.

SUMMARY

Though at first it may appear surprising to include commercial arithmetic in the high school course, a recognition of the fact that the elementary school graduate requires additional

training, and that the subject is distinctly a vocational one, justifies this inclusion. An examination of the causes of failure in arithmetic leads to the establishment of the methods that should be followed in order to assure success. One almost insuperable difficulty confronts the teacher who realizes that it is not wise to attempt a treatment of all topics in arithmetic, but that it is much better to emphasize selected divisions. Professor McMurry's rules for elimination of topics are safe to follow.

The high school teacher aims to inculcate accuracy, speed, and ability to tackle new problems. Accuracy and speed suggest intelligent drill; ability to tackle new problems, a thorough understanding of the subject. In connection with carrying out this latter aim, the applications of algebra are most useful.

The high school work in arithmetic serves to throw additional light upon the subjects of business practice and civics. As a matter of fact, very frequently the lesson is rather one in civil government or business practice than in arithmetical drill.

EXERCISES

GROUP ONE

1. How would the elementary school treatment of bank discount differ from that of the high school?
2. State your objections to including cube root as a part of the high school course in arithmetic. Justify your stand.
3. Why is algebra advocated for commercial pupils in the high school? Discuss fully.
4. Discuss the pedagogic advantages which accrue from the employment of formulas.
5. With the limited time at your disposal, how would you provide for sufficient drill in business arithmetic?

6. What principles would guide you in selecting topics for the high school course in commercial arithmetic?
7. State what devices you would employ in order to make drill work interesting.
8. Justify the offering of commercial arithmetic in the high schools.
9. Show how the course in arithmetic may be correlated with the work in civics and business practice.
10. What is the value of the examination in commercial arithmetic? What principles would guide you in preparing an examination paper?

GROUP TWO

1. Criticise the ordinary course in commercial arithmetic, and suggest changes which would make it of greater service to high school girls.
2. Prepare a detailed syllabus for the first term of the high school. Justify your selection of topics and their sequence.
3. Outline a model lesson in commission, suitable as a type to be followed by the teachers of your department.
4. Prepare notes on a series of six one-hour conferences with beginning teachers of business arithmetic.

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CHAPTER V

OFFICE PRACTICE AND ROUTINE

THE PEDAGOGIC BASIS

SOME practical teachers believe that office work can be learned only by serving an apprenticeship in actual business. But most educators agree that much of the preliminary training may be acquired in school. It is accordingly necessary to devote some attention to the pedagogic basis underlying a proper presentation of the subjects which constitute the main divisions of this chapter. These topics are penmanship, business forms, and office routine.

(a) *Penmanship*. — Upon first glance, it seems almost superfluous to include as a part of the present chapter anything dealing with penmanship. It would seem as though the last word has been spoken on the subject. But there are a number of topics intimately connected with the matter under discussion, which we deem it well to place before the reader. The first deals with the importance of penmanship itself; the second with the way teachers of commercial branches, and others who are not good penmen, may acquire an acceptable business style of writing; and, finally, the method of teaching this subject to pupils of high school grade.

What are the earmarks of a good hand? First, and probably of highest importance, is legibility. Writing is to be read; if it cannot be deciphered easily and without effort, it lacks an essential quality. Still, legibility is not the only

norm. Were it such, we should argue in favor of a printed form of penmanship. Speed, too, is an essential of a good hand. Legible and quick writing, then, is necessary for successful business use. The question now becomes: What writing combines these two important characteristics? Fortunately, we are not compelled to do pioneer work in this field; others have performed the task thoroughly. The cramped finger writing of the past decades no longer obtains. Educators are now quite unanimously in favor of free-arm, muscular-movement writing.

By free-arm-movement writing all do not mean the very same thing. Upon one point, however, all are agreed. It signifies a more general use of the arm muscles and a corresponding decrease in the employment of the fingers. It makes for the ability to continue writing over long periods of time, with a uniform speed and a uniform degree of legibility, and at the same time avoids the old penalty paid by scribes, namely, "writer's cramp." Free-arm or muscular-movement writing may be writing produced entirely by motion residing within the forearm, or it may combine this type with secondary finger movement. In either case, the pen is held lightly; some insist that the pen point over the right shoulder, and that the first, or first and second fingers and the cushion of the arm muscle alone rest upon the surface of the table. Details regarding the relative merits of some of the rival systems need not detain us in the present connection.

There are some who hold that a teacher can instruct in any subject, provided he is a master of method and that there exists a text-book on the topic. This is possibly true, but surely an unethical stand to take by the teacher who essays to handle a class in penmanship without being able himself to do the work he wishes his pupils to accomplish. Moreover,

in manual work and in matters of the hand, just as much as in matters of the mind, the teacher must be a leader. He should teach by example. Unfortunately, many of us have been brought up under a system which made for a cramped and illegible hand, so that when called upon to give instruction in penmanship, we must first put our own house in order. But how may the busy teacher acquire the desired style of writing amidst the many demands made upon his time and energy? We do not now address those of our readers who have both time and opportunity to attend business schools which offer normal courses in the subject, but rather those who must depend upon their own efforts, unaided by personal advice and suggestion from expert penmen.

In the first place, it should be realized that success is open to all who observe three necessary conditions: correct position, proper models, and sufficient practice. By position is meant the proper relation between the body and the writing surface, the correct holding of the pen, the use of good materials, and the existence of proper light. Models include copies to be followed, together with intelligent practice and criticism. Finally, it is not sufficient that one be able to reproduce the copy; practice must be continued until the desired writing becomes automatic. For the person who sincerely desires to become qualified to teach this subject much has been done by a few enthusiastic leaders. Books containing copies to be followed, together with detailed instructions, are now available for self-instruction, while those who cannot come into personal contact with the masters can substitute the benefit of correspondence instruction. And by way of suggestion, some communities, like New York City, for example, have organized classes to instruct public school teachers in the subject.

We may now devote our attention to methods of instruction in penmanship in the commercial departments of our high schools. Before we proceed any further, it would be well to consider the pupils whom we are to meet. As graduates of an eight-year elementary school course, the uninitiated would be justified in assuming that no instruction in writing would be necessary. Experience, however, shows that such is not the case. As a matter of fact, the high school teacher is frequently confronted by the double task of breaking up a rigid finger movement and substituting therefor a free-arm movement. In a number of cases, the task is almost a hopeless one, but the success which has attended enthusiastic workers in the high schools and in the grades should serve to spur us on to renewed efforts. In the schools of New York City, for example, a campaign has been waged so that elementary school teachers have become proficient writers. As a result the graduates of the grades, in many districts, no longer require instruction in penmanship when they enter high schools. But this is not universally true, so that the commercial teacher is not yet free to assume that his charges require no attention in writing. Hence the need of considering methods of instruction.

As a general proposition, the dexterity required by manual subjects is acquired as a result of repetition. A process is gone over repeatedly and finally becomes automatic. From this premise, some have concluded that the best way of teaching penmanship is to concentrate upon it, say, five periods per week for a term, and then to drop it. We know that this method gives admirable exhibition results; we know, too, that just as soon as the subject is dropped, many pupils suffer a relapse and begin their wonted scribbling again. The admirable course, though not practical in most institutions,

would be a five-period course for about half a term, then one of five half-periods for the rest of the term, and a few minutes per day throughout the entire four years. But though these suggestions are not feasible, the general principle will serve us still. Concentrated class work at the beginning, together with home-work practice, and an insistence upon proper penmanship in all written work throughout the school years, would give ideal results. And that this is not an impossible ideal is clear from the parallel fact that many of our institutions have succeeded in establishing good English, not only in the language rooms, but as a necessity in all recitations.

It is still necessary to consider how to present the subject of penmanship as a class topic. The first essential is to break up the cramped style too frequently characteristic of the grammar school boy and girl. For this purpose large ovals, loops, and straight-line exercises have proved themselves most serviceable. Exercises involving ovals and straight lines, gradually decreasing in size, give control. The simple strokes and letters should precede the more complex. Such stems should be employed which, in themselves or by a slight modification, may be used for a number of letters. The sequence of exercises in the copy books may be followed as the principles just enunciated have been, in a measure, observed, but the teacher should feel free to change the order of presentation whenever, because of his own training or through habit, he feels a later copy to be easier or simpler than an earlier one.

Home work should be assigned, and both sides of a foolscap sheet will be about sufficient in amount. For particularly weak pupils, extra work may be necessary. The danger should be avoided of slighting this subject. Impress upon the pupils that most positions are secured through the medium of

a written application, and that unless their writing is of a grade sufficiently good to arrest attention, their letters may not even be read. A marking scheme whereby each pupil is given credit for each letter or figure as soon as acceptable, and where extra drill is required upon work not satisfactory, has often proved helpful. Original exercises involving ovals and other simple strokes help to maintain interest in an otherwise dry subject. Many beautiful ornamental pieces, flowers, vases, and animals are thus produced.

Lawyers are familiar with the poor observation of the ordinary witness and make the most of such deficiencies during cross-examination. Research in psychological laboratories has impressed upon the teacher the fact that it is not sufficient to place before a pupil a model and expect perfect reproduction. The teacher of penmanship employs his knowledge of psychology to the end that the slight differences between good letters and poor ones be thoroughly appreciated by his class. Thus, a certain letter is placed on the board and members of the section are encouraged to criticise it. They are then asked to offer suggestions toward improving it, and also hints helpful in avoiding bad work. They then practice on the exercise in question, and when stopped, are asked to discover certain definite faults in their own work which they may correct by going over the poor letters or words. Finally, individual help should be extended by the teacher, who points out faults and writes models for the pupils to follow.

In concluding these brief remarks, let us decide what is the proper aim of this course. Engraving and diploma lettering is not the ideal aimed at. A legible, neat hand, quickly and easily executed, is all-sufficient. This is often accomplished after a few months' conscientious work, but the complaint still obtains that the upper-grade students and the grad-

uates produce miserable hieroglyphics. So why this relapse? Because our school work is not a unit. Our instructors are specialists, each of whom is intent upon his own particular subject. It ought to be possible to unify the entire work so that each instructor would consciously direct his attention against faults even when not directly concerned with his own recitation. Just as we have succeeded in arousing a demand for better English, so we may hope that the good penmanship which has been acquired in the early part of the course shall attain a true fruit-bearing stage and remain as a permanent asset.

(b) *Business Forms*. — It is customary to teach the commoner business papers in connection with the course in penmanship. The reasons for so including it are that the forms make the penmanship more interesting and that they are simple enough for treatment during the first year. Moreover, parents demand instruction in "practical subjects," like bookkeeping, at once, and it has been found that the treatment of business forms is interpreted as instruction in bookkeeping, as in a certain sense it is, so that the wishes of the taxpayers are honored without forcing the youth too fast. Bookkeeping is not appreciated by the immature, while many of the commercial papers offer no difficulty. Furthermore, even if the pupil leaves school during the first year, a knowledge of forms will often prove beneficial, which is an added reason for offering it during the freshman year.

What forms should be included is the first question that confronts us. Obviously enough, some are too difficult, others are quite useless except in connection with other subjects such as bookkeeping or commercial law, while a number are sufficiently easy and useful to make them suitable for the purposes of the first year's course. Among the latter are

checks, promissory notes, invoices, monthly statements, deposit slips, orders, receipts, and the filling out of a few blanks demanded by the industry of the community. Though most of the papers to be handled contain printed portions, it is well for both pedagogic and economic reasons to have the class write out the entire forms. It is also a good policy to give the class practice in filling out forms, as this latter exercise is what they will be called upon to do in actual life.

Most of our boys and girls who leave during the first high school year, unless they go to a private institute for instruction in commercial subjects, find their way into some office or shop. It is safe to assume that one of the earliest tasks assigned them is in connection with invoicing, so we shall take for first treatment the teaching of the bill or invoice. Prepare them for the form by getting them to see that their parents do not ordinarily pay for purchases from the department store until a "bill has been rendered." "Why is this so?" will surely elicit that it is desirable to know what the bill is for and the price. Further questioning will bring out the need of a date, name of buyer and seller, terms, and systematic arrangement of items. Continued practice will be necessary in order to make their understanding at all satisfactory, but one should not be surprised to find this so when it is realized that the form is quite complex, and that they have had no real world experience. Drill upon a single form should be continued, and variations should not be introduced, until the type has been thoroughly mastered. It is almost needless to suggest that every bill should be regarded as an exercise in penmanship, but it is more helpful to point out that correlation with the work in commercial arithmetic might be secured by having the arithmetical operations performed during the mathematics period. Some invoices are so complicated as

to make it advisable that they be relegated to a late part of the course, and this apparent lack of continuity will be more than compensated for by the fact that interest will be maintained by the introduction of different forms, which would not be the case were all the invoices to be disposed of as a connected series of lessons.

Monthly statements are quite as simple as invoices, but in order to prepare them some knowledge of personal accounts must be assumed. It is sufficient for the present purpose that the student understand that the debit or left-hand side represents the sales, while the other side contains the payments and returns. Exercises on these statements should include their proper interpretation as well as their making, and also an understanding of their purpose in business. Students should bill goods to their classmates and later send monthly statements. These statements should be "checked up," and in the more advanced work, when creditors' accounts have been presented, they should be compared with corresponding ledger accounts.

The subject of checks, together with its full connotation, forms one of the most interesting series of lessons in the course. It involves the opening of a bank account, the keeping of the check-book, the reconciliation of check-book balance with bank balance, and some elementary law connected with checks. We consider it necessary that the student be impressed with the need of filling out the stub first, so as to avoid "overdrawing." The difference between bearer checks and checks made to order of payee should be explained and illustrated. The responsibility of the bank for paying forged checks and for paying "raised" checks ought not to be neglected, but the necessity of so writing the amount of the check as not to encourage alteration should also be discussed. The

simpler indorsements, such as the blank, the full, and the one for deposit only, form a natural part of the course. Besides the law already involved, something might be said regarding the need of depositing or presenting the check within a reasonable period of time. And in conclusion, it would be well briefly to treat of the matters connected with certified checks.

Certain researches of one of the authors¹ has revealed the fact that the business community is not employing promissory notes in settlement of account as a general practice. But the time is not yet ripe to discard these papers from the course under review. Just as in the case of checks, the filling out of the form and the relation between the maker and payee will have to be pointed out. The law regarding the date of payment, the certainty of amount, and the other requisites, after discussion, might be committed to memory in the form given in some of the text-books on commercial law. Single-name paper, as employed for raising funds at one's own bank or from note brokers, might be briefly discussed with profit.

What has just been said regarding the decreased use of promissory notes is even more applicable to the drafts of our commercial arithmetics and of our bookkeeping texts. Though three-party drafts are familiar instruments to continental Europe, very few, comparatively speaking, have been employed in the domestic commerce of the United States since the Civil War. A prominent bank president is authority for the statement that the draft as illustrated in most of our current commercial texts presupposes a set of business relations between business men in separated sections of the country hardly practicable. But though time drafts are no longer familiar, sight drafts to the order of a bank are becoming more

¹ *The Development of Mercantile Instruments of Credit in the United States*, J. J. Klein.

and more common as an effective means of collecting due accounts. Such papers should be freely discussed and set for class exercise. For those who still insist upon presenting the obsolete time draft, the economy effected by avoiding transmission of funds, together with the relationship between the parties before and after acceptance, and before and after payment, should receive attention. And for both forms, besides the corresponding matters which also affect notes and checks, the subject of protest should be touched upon.

Every boy and every girl who reaches the high school might be assumed to possess knowledge sufficient for the purpose of making out an ordinary receipt. Our experience justifies the statement that such is not the case, however. It is thus necessary to set drills on receipts in general and when issued for a specific purpose. Among the latter it would be well to include those given for payment of rent, for deposit on a purchase, and for part or in full payment of a particular invoice. Somewhere in the course, also, though often taught as a part of the so-called commercial English, room should be found for orders, both by mail and when the goods called for are to be delivered to bearer or to some other designated person.

We cannot leave this topic without some word regarding the more complicated and though very important, still less common, business forms. Among these might be mentioned the papers employed in selling, leasing, or renting of real property, in importing and exporting merchandise, in shipping by land or by sea, and in the various special lines, most of which are represented in our larger cities. It must be clear that it would be impossible to teach all of these forms with any reasonable degree of thoroughness within the period at our command, that for some of them our first-year pupils are too immature, and finally, that pupils who remain with us

for only a single term or two will hardly ever be called upon to handle such papers. For all of these reasons, then, we do not favor an attempt to cover all of them. Moreover, some forms, such as those used in making postal, telegraph, and express remittances and others, may be and are explained during the course in commercial arithmetic, while most of the others are more satisfactorily handled in the commercial law course or in the technique of commerce.

Though our stand regarding these matters is definite, we nevertheless recognize the contentions of those who argue in favor of a wider and more general course rather than a narrower one. But we answer that it appears much better to us that a few items of prime importance be thoroughly mastered, rather than that a great variety be presented but not actually learned. Success in the working out of this policy requires continuous drill and close application. Thoroughness is essential, for a check unsigned or a note undated or a draft not containing the name of the drawee may all lead to inconvenience or even to trouble. And yet, though we do favor this thoroughness, we nevertheless regard it as advisable that somewhere during the course, especially on behalf of those pupils who are not to remain with us long enough to graduate, the students be made to realize that other forms are required in business, and if they should ever be called upon to employ them, they can obtain the requisite knowledge by going to certain sources. Indeed, this ability to help one's self is one of the richest heritages which education holds out to the student.

In the chapter on bookkeeping, it was promised that the business forms employed by the so-called business practice or budget systems would be treated of in the present connection. We propose to redeem this promise by way of conclud-

ing this topic. An analysis of the problem discloses that we are confronted with a simple problem of correlation — the close connection between business papers and the transactions they give birth to. A just criticism of many budget sets in bookkeeping is that too much is attempted at once; a complicated business form and a new bookkeeping transaction are introduced simultaneously. The teaching of the form, if thoroughly done, takes up so much time and so beclouds the bookkeeping issue, that often the accounting feature is almost entirely lost sight of. Then, again, papers, such as invoices, notes, and others, occur so frequently that they do not serve any other purpose than unduly to lengthen the course. Our criticism is thus divisible into two parts, — the first deals with the introduction of complicated papers during a bookkeeping exercise, the other with the *padding* process.

Constructively, we would advocate that budget sets be not introduced until much later in the bookkeeping course than is the present vogue. When they are introduced, they would serve their proper ends if much curtailed both individually and in volume; that is, if single papers were less lengthy, and if there were fewer repetitions of similar forms. In other words, we favor *really* shorter sets. And along these same lines, we should very much like to see fewer sets involving the actual handling of business forms, thus leaving more time for bookkeeping and accounting *per se*. Finally, just one other suggestion, which we regret cannot be carried out in many of our institutions. Inasmuch as it is well to treat business forms as distinct from bookkeeping, the best sort of correlation and efficiency would be consummated were it possible to employ the papers executed during the first year's work in the bookkeeping of the second year. But though this is an ideal to be striven for, at least a part of it might be realized were the

knowledge gained to be so employed as to save some time in bookkeeping by decreasing the proportion now usually allotted to the making out of forms and papers supposedly already mastered.

(c) *Office Routine.* — Educators are coming more and more to recognize that our schools and institutions are not alone for those who are fortunate enough to be able to complete the full course as planned, but also for those who drop out by the wayside. The recognition of this fact, together with the influence of the German system of education which aims to train for life work, has led some educational leaders to strive after a curriculum such that while each term's work is in a way a preparation for the next, yet each is a unit in itself and useful even without the supplemental work of the higher grades. The practical application of this ideal is yet to be attained, but the mere fact that it is regarded as a desirable end must help the programme maker. A corollary of the main thesis as applied to commercial high schools would be that the first year should be a foundation for the second, and at the same time be fruit-bearing itself. But the boy or girl who must leave us after a single year cannot hope to be prepared for the duties of the bookkeeper or the stenographer. He or she should, however, be able better to earn a livelihood because of this year's study. A definite training in the duties of the office boy or girl would meet the twofold requirements of modern education that each unit of work be both complete and preparatory.

The course of study for the first year is so heavy as not to permit the inclusion of a special course in training for office duties. But somewhere, in connection with penmanship and business forms, or with commercial arithmetic or with English, or combined with two or more of these subjects, a place for

the work could be found. Here the filing of letters and other papers, the caring for incoming and outgoing mail, the receiving of callers, the answering of telephone calls, and the miscellaneous assistance one may be called upon to render to superiors, should receive attention. It is obvious that, except in communities where there is a single industry, no attempt can be made to train for the work in a particular office. In the larger centres the duties of the office boy in a stock broker's office differ considerably in detail from those in a manufacturing office, say, as indeed they differ somewhat between two offices of concerns in similar lines, so that our public schools must content themselves with offering instructions of a general nature. Still, as pointed out in the final chapter, a real bridging of the gap between school and office is possible and feasible.

Many people call at an office during the course of the day. The office boy very often is the first one to greet the caller. The reader must be familiar with some of the many stories told of the brazenness, stupidity, and lack of manners of some boys in receiving certain important visitors. A few such tales serve as an admirable introduction to the need of courtesy and politeness. The implicit and explicit obedience of orders regarding the wishes of superiors to receive certain people, without violating confidence reposed, needs emphasis. The keeping of the waiting-room neat often rests upon the beginner, so that it is quite apropos to touch upon this subject in the present connection.

There are many kinds of filing systems, but the principles embodied in the old alphabetical letter file persist. It is sufficient for the purposes of the beginners' class that they understand alphabetical and numerical filing in its simpler forms, while the more complicated kinds should be reserved

for treatment in connection with the more advanced work of the course. The students should be shown how to arrange the filing matter so as to avoid the necessity of turning sections back and forth. Here, too, the indicating on the outside of the folded matter of the nature of the contents might be alluded to. *Precis* writing, as practised in the English room, would serve in good stead here. In many cases, the name of the parties concerned, together with the date, is sufficient, so that the important item consists in the proper placing of such information, and the students will in many instances be able to suggest the best arrangement. In other cases, folding of the paper in such a way as clearly to indicate the desired information may be both desirable and feasible.

Inasmuch as the mail is often assorted previous to distribution among departments, it is well that our students devote some attention to this matter. The most elementary kind of separation consists of a division based upon the information contained on the envelope. This is often supplemented by having the mail matter opened, so that it becomes necessary to discuss the use of a paper cutter without injuring the contents of the envelope. In more advanced classes, it may be desirable to open the envelopes and distribute the mail after reading it. At first each letter should deal with a single department, but later complications might be introduced by having the communications refer to two or more departments. In this latter connection the use of marginal notations or stamped instructions to pass the matter along could be introduced.

But while the matter of receiving the mail is as often as not cared for by a superior employee, the beginner is almost invariably called upon to dispose of the outgoing correspondence. Among the items to be considered in this

connection are the stamping and sealing of envelopes, the making sure that the letters have been properly signed, and that where enclosures are called for they have not been omitted, the folding of the letter heads, and, sometimes, the addressing of envelopes to correspond with the salutation on the communication. Here the need of care to avoid confusing mail had better be emphasized. The use of sealing and stamping devices might be illustrated if the opportunity is afforded.

At this point the use of office furnishings for the purpose of giving the pupils practice might be profitably discussed. If funds are available, it is undoubtedly good policy to acquire as complete a set of modern appliances as possible. For those institutions that cannot aim at completeness in this matter, the following, in the order given, is suggested: a filing cabinet, a letter copying press or a rotary copying press, an envelope sealer, and an automatic addresser. Minor furnishings and variations need not be specifically indicated. In the absence of certain items, graphic illustrations with clear explanations, especially if in connection with an opportunity to inspect the object under discussion in actual use in some office, are admirable substitutes for personal experience.

The beginner must be impressed with the fact that any position he secures is a stepping stone to higher ones. In order to prepare himself for greater service, and to merit the reward of promotion, it is essential that he give the best that there is in him. He should be willing and anxious to assist others, for only by so doing will he be able to fill higher places when called upon. He must be punctual, industrious, obedient, and courteous, so as to attract attention to his virtues. He must also be ambitious, and if he has had to leave his school education prematurely, he should strive unceasingly to improve

himself by reading books dealing with his work, by attending evening classes or enrolling in correspondence schools.

Other items connected with the conduct of an office can best be treated in the bookkeeping, stenography, and typewriting classes. Much good mental discipline is afforded by various problems which arise in connection with the managing of an office. Here all the subjects of the commercial course are called into play, so that office routine involves in a large measure the science of business. As a simple example, what should you do if you learned that a certain party to whom you had just shipped goods was a probable bankrupt? Or suppose a stranger wished to open an account with you, what action should be taken? Or, as a final example, how would you decide whether or not to accept an order for the first time from a foreign country, and if you did accept, when and how would you secure shipping instructions? Questions such as these offer great opportunity for the development of initiative on the part of our pupils, and at the same time supply them with what is much more useful than information and facts, namely, the ability to acquire light for themselves.

SUMMARY

This chapter concerns itself with the subjects of penmanship, business forms, and office routine. It was pointed out that despite the fact that educators have come to realize the necessity for instruction in free-arm, muscular-movement writing during the eight years of the elementary school course, sufficient progress has not been made to obviate the necessity of further attention during the high school course. As the tests of good penmanship are legibility, speed, and ease of execution, these characteristics determine the methods to be employed by the teacher of penmanship. One basic factor

in all habit-forming subjects, *i.e.*, initial impulse, cannot be employed, because the task is rather one of unlearning than of acquiring new knowledge or new power. Constant practice, based upon correct models, and subject to careful and intelligent supervision, is essential to success. It is not sufficient that the penmanship teacher alone insist upon correct posture, etc., but the teachers of all the other subjects in the high school course should be encouraged to exact high-grade written work, so that good penmanship shall become general.

One difficulty that confronts the administrator who is desirous to teach good penmanship is that many teachers are themselves poor penmen. But this fact need not handicap the teaching corps indefinitely, because every teacher may become proficient in muscular-movement writing by conscientious and persistent effort.

The commoner business forms should be presented during the first year of the high school course. The reason for this statement is found not alone in the fact that the subject is sufficiently easy and certainly worth while, but also because the taxpayers demand early instruction in practical subjects such as bookkeeping; and business forms, when properly taught, "appears" to be bookkeeping. Though it is true that this step is somewhat of a compromise, this is only apparently so, as no harm has been done, and the students feel that they are receiving instruction in the subjects which they believe are most useful.

The more difficult business forms should not be presented until much later in the course, and then in connection with bookkeeping and business law. It is a mistake to attempt to teach all business forms at once, as many of them cannot be comprehended by the students with their apperceptive basis at the time when they enter high school. Later on, as

their experience broadens, they are in a position to benefit by the advanced work.

Another benefit which accrues as a result of presenting business forms during the early part of the course is that much detail work in connection with the so-called budget system of bookkeeping may profitably be curtailed. As a matter of fact, one of the main objections to the budget system is that the volume of preliminary work required, in the preparing of forms and handling of papers, is so great as to minimize the real instruction in bookkeeping. Moreover, the handling of these papers, in connection with bookkeeping, tends to distract the attention from bookkeeping to the business forms, and frequently leads to the making of entries not fully understood.

As educators have come to realize that the high schools should be thoroughly democratic, they have come to demand that every term of the course shall be complete and fruit-bearing, so that the boy or girl who cannot afford to graduate shall nevertheless be benefited by studying for a short while. This does not mean that the entire course is not a natural progression, so that each year's work is a preparation for the next, but rather that while each term shall lead to the succeeding term, nevertheless each year shall be self-sufficient and worth while. As a corollary, it is advocated that office duties shall be a subject of instruction during the first year, not as a special course, but correlated with some other subject. In this connection it is necessary to point out that certain office appliances must be secured. Finally, much of the work in connection with office routine and practice belongs to the course in stenography and typewriting, and should there receive proper attention.

EXERCISES**GROUP ONE**

1. Why should penmanship be taught in the high school?
2. Explain your method of securing good results in penmanship.
3. What steps would you take to improve the penmanship of the teachers of your school?
4. Explain fully the value of penmanship aside from its practical aspect.
5. Should business forms be taught as a separate subject or in relation to other subjects? Discuss fully.
6. Name three common forms suitable for first year's work, and three common forms too difficult for the work of beginners.
7. How may instruction in business forms be interpreted as elementary bookkeeping?
8. Describe the budget system of bookkeeping, and discuss its place and value in the modern commercial school.
9. Explain the method of teaching filing in a high school.
10. Of what value is the subject of office routine to students who remain in high school only six months?

GROUP TWO

1. What per cent of pupils who enter high school in your city require specific instruction in penmanship? Analyze the situation and develop a plan whereby the various groups are offered such work in this subject during the first year as will benefit them most.
2. Prepare a course in filing for a high school consisting of three hundred commercial pupils. Assume that \$200 has been placed at your disposal, and that you will have the services of one teacher for six hours per week.
3. Develop a system of correlation between the various subjects in the curriculum of your school, so that there will be no need of offering business practice as a separate course.
4. Criticise the course of study of your high school, in its relation to the subject-matter of this chapter, and offer specific constructive suggestions.
5. What provision would you make to keep the instruction of the subjects discussed in this chapter up to date?

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CHAPTER VI

BOOKKEEPING

PEDAGOGIC PRINCIPLES

It has become quite the fashion for writers of bookkeeping texts to refer to the fact that though four hundred years and more have passed since Fra Paciolo's work, the basic principles of the subject have undergone no change. Similar statements might be made of mathematics, languages, and other branches of knowledge. It is simply another version of the time-honored truth that though principles are permanent, applications are transient. So it is that just as in the case of those sciences and arts which constitute the subject-matter of our school and college curricula, experience has furnished in at least a few of the topics grouped under the title Commercial Branches a coördinated mass of knowledge to which pedagogic devices have been applied. This chapter deals with the application of such doctrines to bookkeeping alone.

Many of our institutions, responding to the ever increasing demand for business education, are now offering courses in bookkeeping. Here, as also in schools where complete commercial instruction and training is offered, this topic is regarded as a major subject in the course. Sound judgment underlies this view, though it is often observed that such selection has been frequently the result of blind imitation of work given elsewhere. Two other reasons have also contributed to the position occupied by bookkeeping: the fact that knowledge

of this topic is readily translated into terms of dollars and cents, and secondly, that greater apparent progress has been made in the direction of "teachableness" of this subject because of the number of texts and available material on the market.

But even a cursory examination of the technical literature on this subject will surprise the investigator with the sameness of the many texts offered for sale. All of these books are roughly divisible into two groups, — the theoretical and the practical, the latter being in reality a combination of the two. Most of the books dealing with the theoretical presentation follow what is known as the journal-ledger method, *i.e.*, the journal is taught first and postings to the ledger subsequently. From time to time, different authors have attempted a more scientific as well as a more pedagogic method by teaching the account first; practically all, however, have missed the essential relationship of account to account, which obtains in the double entry system. It is also to be noted that, with a very few exceptions, all are agreed that double entry bookkeeping is to be presented at the start and as the essential method of the course, while single entry is relegated to a subordinate part. Regarding the texts which deal with practical bookkeeping, and the greater number nowadays are these, the so-called budget or business practice system appears to predominate. Detailed criticism and further comment on this topic are reserved for later treatment.

Does bookkeeping deserve the high position which it occupies in commercial education? It surely does in view of its recognized importance in the business community. But it must be admitted that it holds the position it does despite, rather than because of, what teachers have done for it. This statement is made advisedly in view of the fact that

many successful pedagogues, even after fifteen and twenty years' experience, have either a warped or an inadequate idea of just why the subject is taught. Many of them will say when asked for the first time that the *sole* excuse for teaching the subject is because of its utilitarian value, *i.e.*, because of its usefulness as a trade or calling. While fully in accord with the doctrine that bookkeeping is distinctly a practical subject, it must be evident that to one whose only aim in teaching a subject is an attempt to impart a knowledge of "how to do it," the method whereby this object may be attained is of small consequence. In other words, it sums up the fault of teaching a trade now counteracted by the manual training movement, which is a wise and serious endeavor to substitute adaptability for adaptation.

✓ It is premised of bookkeeping, as of any other subject, that the very best index to the methodology to be employed in presentation is a clearly defined motive. We must first decide *why* we teach it. The *how* and the *when* are after considerations. Why, then, should the keeping of books be taught in our schools? It is necessary that we regard this question from a twofold aspect of pupil and subject-matter. To understand the former a knowledge of psychology is requisite; a thorough understanding of bookkeeping and accounting is essential for the latter. The first chapter of this volume summarized the psychologic foundation underlying teaching success. It is assumed that the reader is sufficiently familiar with his subject to make specific reference to texts on bookkeeping and accounting unnecessary.

What may the pupil reasonably expect as a result of his course in bookkeeping? Elsewhere is discussed the purpose and aim of the commercial course. Here we concern ourselves with the result of the work in bookkeeping alone. Obviously,

the student should be prepared to start, or to continue, a set of books previously begun, in an ordinary trading, commission, or manufacturing concern. He should be able to conduct the books of such an enterprise, whether organized as an individual, a partnership, or a corporation. He should be able to devise the books incident to simple partnerships as well as to corporations, and be familiar with the ordinary adjustments occasioned by the results shown at the end of fiscal periods or due to dissolutions. The additional ability afforded by training in accounting is reserved for a separate chapter, and the incidental knowledge of business forms and usages inherent to a practical knowledge of the subject is also treated of in another connection.

The aim of a course in bookkeeping is thus easily outlined. Nothing less than what has just been sketched is deemed requisite by most modern educators. The fault lies in the belief that the imparting of the knowledge here outlined so briefly sums up the end and aim of the course. It is just here that we take issue with the old-school commercial teacher. It is not enough that our pupils know how to journalize, post, prepare statements, etc. Too long, indeed, have we been content with teaching which would result in just this knowledge, and nothing else. Yes, it was knowledge, and not ability, that was given. We argue for knowledge plus that power which enables one to cope with the hitherto unknown. Consider this illustration. The advent of the modern corporation necessitated entries previously not experienced by the bookkeeper. The literature of our subject abounds in examples of how the kind of training we deplore limited the understanding of those called upon to solve the new problems. We are just beginning to emerge from the foolish errors which their solutions led us into. None of us can tell the changes which

the near future has in store for us. It is our duty, now that we are awake to our true position, so to *train*, not merely impart information, as to give this power of initiative, of reacting to new and strange conditions. This can never be accomplished by the rote-method which once prevailed.

What then, is the question, should be given besides the drill and imitation, which will make possible the keeping of a set of books? The reasoning power should be, and can be, developed, as will be shown in the model lessons which follow. The constructive imagination, that power which next to reason makes life worth while, is developed by bookkeeping, perhaps better than by most subjects; and this, too, will be illustrated in models to be presented subsequently.

Thus, to sum up, we want the course in bookkeeping (which is often the only commercial subject offered, or in many places, as for instance in so many private business schools, the only subject which affords the higher mental discipline) to be treated in such a manner as to realize in full measure all its pedagogic possibilities for the student. To this end, the barren imitation of types and models, which for so long has been the chief means of imparting familiarity with the subject, must be superseded by the modern treatment already suggested. When the conscientious teacher of the newer bookkeeping grasps this idea, the problem of the methodology will evolve slowly, perhaps, but surely; for just as the boy is father to the man, the thought is sponsor to the fruit-producing effort. But before we consider the subject of method, we must return to the other phase of the problem we have been discussing — the teacher.

What is expected of the ideal teacher of bookkeeping? It would be a needless task to enter into a discussion of those elements without which successful teaching is impossible.

Many books have been written on this matter, so that it may almost be assumed that the last word has been spoken. Besides those qualifications inherent in the make-up of the ideal pedagogue, certain other factors are almost essential for the best results in the teaching of bookkeeping. No such teacher can be a bookworm. He must have first-hand knowledge of the world outside the schoolroom. For this reason it is best that he should acquire some actual office experience, if necessary, during the summer vacation. The corollary often deduced from this proposition is as actually, as it is logically, false. The man who has nothing else to offer except his practical experience cannot teach the subject; the bookkeeper or accountant *per se* is not the person for the class room. Though the stand we take is quite heterodox, and will not be applicable for some years to come, we believe that the ideal instructor is he who, in addition to the culture and training of the college and university, has had the benefits of practical experience in the world of business. But this discussion need not detain us longer, for the problem has been treated of in Chapter III, and will be further considered in Chapter XV.

We return to the question — Why should bookkeeping be taught in our schools? As has already been intimated, its practical utility is the prime, but by no means the only, reason. The present teaching of accounts consists, in general, of a scheme whereby rules are arbitrarily assigned, often disguised as reasons by the use of the logical conjunctive *because*, and an attempt to impart familiarity by long-continued repetition of assigned model forms. Consider these illustrations taken from a number of widely used texts:

- (a) Debit what the business receives, or what costs value.
- (b) Whenever you pay a person on account, debit the person.
- (c) When you owe a person, credit that person.

(d) Debit cash account *because* the business has received value.

(e) Credit the person's account *because* he has gotten out of our debt.

In each of these cases it is readily seen that the work is absolutely deductive, and this at a stage when it ought to be entirely inductive. The student is required to take everything on faith; if he errs in journalizing, he is told, "You are wrong because Cash must be debited when received," etc. As will be shown later in this chapter, the stultifying influence of such procedure may be entirely removed, and that without lengthening the time devoted to presentation.

As a corollary to the assumption that bookkeeping is taught solely for its utility, another evil has arisen. In the method we have just criticised, the faculty of imitation is appealed to almost exclusively. The appeal to the reason, the arousing of the apperceptive basis, the stimulation of the imagination, — for all of which the subject offers a great opportunity, are almost entirely neglected. Consequently, we find that teachers of bookkeeping deem it necessary to repeat elementary work in advanced classes. Thus, in ever so many texts, and therefore in many, many class rooms, as new matter is introduced, the sets become longer and longer, because, besides the drill on the new material introduced, it is deemed necessary to repeat previous work. The reason for this repetition is often stated as being due to the fact that the work of the school should approximate as closely as is possible to actual business, where easy or elementary work and more difficult or advanced operations arise almost simultaneously. Our objections to a continuance of such procedure are, first an undue mass of materials; second, the dispersion of effort by requiring as much attention to what is already known as to new

matter; third, the practical impossibility of devoting more time to work of greater value to the pupil, such as the making of statements and the drawing of inferences from the books. It seems to us that the solution is suggested in the neglect of commercial teachers to heed that sound pedagogic doctrine which enunciates that the best method of learning a topic is to understand it. "That which one understands, one need not memorize." In fact, the weak mentality of so-called commercial students, observed by their teachers and their subsequent employers, is probably directly traceable to their training (or lack of it) in school, where, instead of developing the reasoning faculty, all effort was concentrated upon the almost inhuman — surely *inhumane* — task of forcing disagreeable and superfluous material upon the youth. The authors have demonstrated, time and time again, that a better understanding of bookkeeping can be imparted by proper methods with the use of from one-quarter to one-third of the usual mass of material than is at present ordinarily attempted with the well-padded text and modern budget. Hence, to put the objections affirmatively, we favor shorter sets, less arithmetical work in accounts proper, and much less, though not entire neglect of, repetition of old matter.

If, then, utility is not the all-sufficient motive for the teaching of bookkeeping, what is? Before we can answer this question, it is well to recall that modern conditions have so changed the complexion of the industrial and economic life that much of the disciplinary and cultural training afforded by the classical high or secondary schools must either be denied the commercial student or else given him in conjunction with his practical education. Elsewhere in this volume the cultural side of business education is discussed. Bookkeeping is often the medium whereby mental discipline must be furnished, if

at all. As will be shown in the model lessons below, the inductive processes will be employed in the establishment of rules and forms, while deduction will be the operation in their subsequent employment. Proposed solutions should be tested at all steps, by questions which should tend to confirm the correctness of entries or else expose their faults. This, also, will be illustrated later. Thus, it is seen, bookkeeping can be so taught as to appeal not only to the parent of the boy or girl who wishes his child to acquire a knowledge of the subject because of its practical aspect, but also to the parent who, entirely aside from the utility a subject may possess, desires the mental power which comes from proper mind exercise. If this latter phase of the subject can be presented to the teachers of the land with nearly the strength and force with which it appeals to the authors, and if, besides, a text can be produced embodying the principles here enunciated and later illustrated, then it is confidently believed bookkeeping will come into its own rich heritage.

A few additional general remarks are in order before we proceed to a consideration of special lessons and topics. Inasmuch as the subject of bookkeeping is receiving serious attention on the part of educators who are probably competent to produce texts of more permanent merit than those now in use, and notwithstanding the fact that a good beginning has already been made, we refrain from recommending any books. There can be no doubt, however, that a text embodying the pedagogic doctrines enunciated in this chapter, would fill a real want. If, then, no ideal work is available, shall all text-books be abandoned? Most emphatically no. Every practical teacher knows that for purposes of efficient review, texts are necessary. They are also valuable time-savers in that a student may employ them for general reference in the

matter of forms, commercial paper, definitions, etc.; and they give abundant drill material.

As some sort of a text is essential not only for the reasons outlined in the previous paragraphs, but also as furnishing the overworked teacher with the list of transactions, one other general question remains. This query deals with the characteristics of a good practice set. We are in entire accord with those who favor the use of the budget or business practice set, though in passing, we wish to state that we do not favor the use of correlated business papers until the theory has been well presented. For a fuller discussion of this topic, the reader is referred to the chapter on Business Practice. From the point of view of bookkeeping alone, a number of simple tests suggest themselves with reference to the requirements of the practice set. These are:

1. They should emphasize the new points illustrated by the introductory exercises which should always precede a formal set.

2. Each set should be a review of previous work, but the amount of such review work should be at a minimum. The authors have in mind a set of corporation transactions consisting of over one hundred and fifty entries, of which less than one-tenth were directly concerned with corporation accounting.

3. The arithmetical work involved should be simple. Involved commercial arithmetic should be left for the mathematics room. Teachers are too prone to excuse lengthy problems on the ground that they are "practical"; true, but they distract from the subject taught in the bookkeeping room. If possible, a correlation between the work of the bookkeeping and mathematics room, to the end that most of the arithmetic should be performed in the latter recitation, would be an ideal plan.

Before asking the reader's consideration of the illustrative material about to be presented, it is well to caution him against a blind acceptance of what is offered. The authors realize the futility of attempting to impress upon the teacher their methods and devices; all that is attempted is a suggestive portrayal of what may be done to the end that life interest and pedagogic utility shall be imparted to the teaching of bookkeeping. Hence, these model lessons are to be used only as an index to a personal treatment of the subject by each teacher for himself. As a matter of fact, the authors themselves do not adhere to a single mode of presentation; they have the aim of the given lesson before them; they are then in a position to avail themselves of the opportunities of the moment in the matter of individuality of pupil and class, and changes in time and place, to adapt the work to the exigencies of the occasion.

The experienced instructor, and to a greater degree the conscientious beginner, finds the first lesson in bookkeeping as difficult a task as any single step. Here, as in the real world without, the first impression counts for much. Of course not much need be said of teachers who are known to commence work by instructions such as these: "Open your books and study the first two pages;" or, "Memorize all the rules and definitions on pages 4 to 8 inclusive."

Here no difficulties arise because none are felt. But is not the subject entitled to as favorable an introduction as it is possible to give? We think yes, even though it is the experience of many of us that the average pupil approaches the subject so eager for it that he needs no artificial stimulus to awaken his interest. It has usually been our custom to discuss with the class, before beginning the formal study, the importance of bookkeeping to the business community, the

openings in business for bookkeepers, their chances of promotion, etc., etc. It has always been found that many students take pleasure in contributing to such a recital from the experiences of their friends and relatives.

As will be seen, double entry bookkeeping is taught first, and this for a number of reasons. Practically all concerns requiring the services of a bookkeeper demand one familiar with this system. The student who is forced to drop his studies prematurely thus acquires the more useful of two methods, and, finally, the transition from the former to single entry is easier and more logical than in the reverse order. Let it be remembered that single entry, from the standpoint of the student mind, is not synonymous with *simple* bookkeeping.

We have had occasion to object to the exclusive appeal to memory in the teaching of accounts. This objection will be found reiterated subsequently. But let us not be misunderstood, for we stand second to none in our appreciation of the automatic processes of habit which conserves the energy of the human machine, so that more time and more effort be available for new situations. Nevertheless, we are compelled to take issue with the narrow-minded policy which claims that because an operation, or a set of operations, is eventually to become automatic, blind, unthinking, and unreasoning drill is the method indicated. It is true, of course, that after a number of similar transactions have been handled, they will come to be correctly recorded without a conscious hesitation over the solution; this result is natural, but it does not follow that because the mental process is as is here indicated, that memoriter work should predominate in the bookkeeping room. In fact, the admission that the rules for debiting and crediting, for example, are unconsciously mastered in time, is one of

the strongest arguments against the spending of time in memorizing such rules.

MODEL LESSONS

Introduction — First Step

In order to save the reader's time, comment and length of questions and answers will be curtailed as far as possible. The answer, unless otherwise stated, is the one finally accepted by the teacher, and then restated for the sake of finality. These outlines are all based on lesson notes taken from the author's plan books.

Why does a business man "keep books"?

Many answers will be given, but they can readily be tabulated by their intent so as to show this answer:

In order that the proprietor may know the *progress* and the *condition* of his business.

What kind of business does a person do? (Take only a few.)

He trades, he buys and sells, etc.

When a business man buys a case of shoes, or sells a pair, what is this buying or selling called?

A transaction. (It is often well to make this statement, though in general very little should be told which the student can get for himself without too much sacrifice of time.)

Mention some transactions which occur in business.

Besides those given, paying wages, rent, telephone bills, etc.

In each case elucidate that every transaction involves an exchange (transfer) of equal values. (Would you pay \$4.00 for a \$3.00 hat? Would an employer pay \$12.00 for work if he could get similar service for \$10.00?)

Bookkeeping teaches us how to write or record such transactions. We now proceed to record a few of them.

Write on the board, or dictate to class, the following transactions :

April 3, Sold 2 bbls. Flour at \$8.00 = \$16.00

April 4, Sold 1 bbl. Flour at \$8.50 = 8.50

April 4, Bought postage stamps = .50

April 5, Sold 5 bbls. Flour at \$8.00 = 40.00

April 6, Paid wages to boy = 4.50

How much is left, or what is the balance?

Offer this as a simple problem in arithmetic. Some boy will volunteer a solution set down in this form :

What was received :		What was spent :	
April 3	\$16.00	April 4	\$.50
April 4	8.50	April 6	4.50
April 5	<u>40.00</u>		
Total amount received	\$64.50	Total amount spent	<u>\$5.00</u>
\$64.50 minus \$5.00 = \$59.50, balance.			

Elicit from class that you had, first, a kind of diary record, *i.e.*, the list of transactions. Then you arranged the individual entries, *items*, in the form shown. Then ask why you did so.

This arrangement is known as a "cash account," because it is an account, or record, of money or cash. Set another similar exercise, and then show them a formal cash account (in their text-books, on the blackboard, or on a chart).

This account is not the cash book, but the ledger form. Get them to point out the "cash received" column, the "cash paid out" column. Why are dates desirable? Are they really essential? Could you determine the cash balance if the dates were omitted? How about the explanation spaces? We satisfy their natural desire to know by telling them that we could insert opposite April 3 — "2 bbls. Flour," but for the present we need not do so. The account is taught

first because it is the fundamental notion in bookkeeping. The first book taught is the ledger because it is the book of accounts.

The chief argument in favor of the procedure of those who teach the daybook, or journal-daybook first, is that it is the chronological and hence the logical order, and that it is in line with the historical development of the subject. This stand has no logical, philosophic, historical, or pedagogic leg to rest upon. The first bookkeeping was of the ledger solely. And it has lately been called to our attention that as a sort of curious commentary on the law of evolution which states that the life history of the race is epitomized in the development of the child to man's estate, the child-mind of an untutored man who attempts bookkeeping without instruction naturally hits upon the use of ledger-like accounts.

DEBIT AND CREDIT

No mystery attaches to these terms. They may be treated as follows:

What is the name of the first column? (No *concert* answers.)

The receiving column.

Can you think of any other name for it?

The first column; the left-hand column; etc.

Now tell them that bookkeepers call it the debit column, for a reason they will understand better as they study more of bookkeeping.

Similarly, the other column is referred to as the credit column. Follow this up with a few short exercises in cash accounts, in which the arithmetic is simple.

It is preferable, often, to use a sheet of paper divided by a perpendicular line through the centre rather than conven-

tional ledger sheets, for reasons of economy and speed. These are often called "T" (tea) accounts, because of the form:



Rules for Debiting and Crediting the Cash Account

The reader will observe that thus far the work was correctly performed without the conscious use of any rule.

Now take the debit side of a Cash account. Point out the various items and ask, in turn, what each item denotes. They will see the point of similarity, viz., each represents money received by the business. Similarly, the items in the opposite column represent money paid out by the business. They will see that if the columns were transposed consistently, the balance could be as readily determined. But as the first order is the one employed in business, we shall adhere to it. Ask for a formulation of rules or agreements, and accept:

Debit Cash account for all money received by the business.

Credit Cash account for all money paid out by the business.

Ask them to write from dictation: Debit Cash account \$15.00; debit Cash account \$25.00; credit Cash account \$12.00; etc.

DOUBLE ENTRY BOOKKEEPING

Just as in the first lesson, no technical terms are to be employed until the way has been paved for them.

Recall that bookkeeping is a record of business transactions. As no one would desire it to be a record of one-

quarter, one-third, or one-half of the transactions, but of all of them, it is a complete record.

Consider the Cash account employed in the last lesson. It is a record of all the cash received and paid out by the business.

If you ask whether the business consisted of anything besides the giving and receiving of cash, the class will see that goods were bought and sold, wages and rent paid, etc.

If bookkeeping is to be a complete record of all business transactions, the criticism that may be made of the Cash account as the only record is its insufficiency. For instance, it does not show what was bought and what was sold.

Set a transaction involving a purchase or a sale of flour, and ask, — “Can you think of any way to keep a record of goods bought and sold?”

(The usual response is to insert explanation in the explanatory space.)

Our experience leads us to believe that this is the psychological point to grasp the meaning of the generic term, *account*.

Lead them to see that the Cash account is a systematic collection of items, each one of which refers to cash, and that all are gathered together under the title “Cash.” But why “systematic”? Because items having the same tendency or meaning are segregated in a column reserved for such items. Thus, money received from whatever source and for whatever purpose is entered in one column, etc.

Next get them to frame definitions for the Flour account, Corn account, etc., they are about to use. If their notions are correct, — and let them see clearly that they are still to test the correctness of their views, — we are ready for the final step. This consists of deriving the conception of the term

Write this transaction on the blackboard :

Bought 10 bbls. Flour at \$7.50 = \$75.00,
and require the entry for the same.

They will give the cash entry.

But this is not a complete record, because it does not consider the flour. They will readily see the need of opening a Flour account.

Shall we debit or credit this account with \$75.00?

They usually give debit, which is accepted tentatively.

(Give few similar problems, also employing wheat and corn, and involving both purchases and sales.)

They will then generalize these individual notions, resulting in the following agreements :

A. 1. — Debit Cash account for all money received by the business, and at the same time

2. — Credit another account for the same amount.

And in a similar way :

B. 1. — Credit Cash account for all money paid out by the business, and at the same time

2. — Debit another account for the same amount.

They are now also ready to see that every business transaction is an exchange of equal values, and that bookkeeping is the recording of such exchanges of equal values. They will readily agree that no entry is complete until this double relation has been recorded. But what is the name of a system of bookkeeping which requires such a double entry? Simply enough, double entry bookkeeping.

The class is now in a position to deduce the basic principle of double entry bookkeeping :

**Every Transaction must result in Debits and Credits of
Equal Amount**

EXPENSE AND MERCHANDISE ACCOUNTS

Salary account, Rent account, and Stationery account may next be established.

The next steps may consist of a generalization whereby salaries, rent, postage, etc., are grouped under the general term Expense. In a similar way Merchandise account is arrived at. Though the authors are in hearty accord with Professor Charles E. Sprague's unanswerable argument that an account which has to be made over should be made correct at first, we do not advocate, at present, the teaching of Merchandise Purchase and Merchandise Sales account, because the change involves too great pressure upon the teacher dependent upon the available elementary texts. In passing, however, it may be said that the authors have conducted the suggested experiment in one of their classes, with satisfactory results.

THE PROPRIETOR'S ACCOUNT

Now that some conception of fundamental accounts has been acquired, we are ready to go a step further. Though the introduction of the proprietor's account at this point is not sanctioned by that principle of pedagogy which requires easy gradation from lesson to lesson, we are inclined to make a desirable sacrifice, because when this account has been mastered, complete sets for practice become possible.

We are ready to consider the method of presentation. Set for solution an ordinary transaction involving a cash investment. Despite the fact that the class has been drilled on the need of first deciding whether Cash account is to be debited or credited, and then to consider the other account, they will always hesitate at this problem. Suggest that the

Cash account be dealt with first. Was this money received or given by the business? Here is the place to develop the distinction between the proprietor and his business. The exercise should include withdrawals and additional investments.

It is not deemed necessary, nor, indeed, will space permit, to illustrate all the steps of a complete course in the subject which forms the topic of this section. The syllabus which is appended to this chapter suggests the order in which the various divisions should be treated. Though there exists very little doubt in our minds regarding the advisability of a strict adherence to the suggested order in the beginning, greater mobility is permissible, and probably desirable, in the more advanced portion. In order to avoid the breaks in the continuity of the narrative, and because the form and method of the class-room question and answer device has already been sufficiently indicated, the balance of these model lessons will be in the narrative form.

PERSONAL AND OTHER ACCOUNTS

In the introductory paragraphs, the statement was made that the pedantic rules to which we took exception might be avoided. We propose to illustrate this point in connection with personal accounts.

Commence this lesson by recalling the basic principle of double entry bookkeeping. Then write this transaction on the board: Sold to Thos. Jones, on account, 3 bbls. flour at \$8.00, \$24.00. Your request for the entry will probably result in Cash account, Debit, and Merchandise account (or Flour or Merchandise Sales account) credit. Apply that sobering influence, always at the teacher's command, the question, What does the credit to Merchandise account indicate? Was merchandise really sold? What does the

Debit to Cash account show? Was money actually received? If your bookkeeping is to be a truthful record, the cash entry must be wrong. (Continue questioning, of course.) But some debit is necessary. Agree to accept a debit to a new account, that of Thos. Jones. Elicit that it is intended to show that Mr. Jones owes us \$24.00. Now to test the correctness of our proposed solution, what should the Jones account show after he pays us \$10.00 on account? (Explain "on account," if necessary.) Make the entry for this part payment using agreement A 2, and as Jones is the only possible name of the "other account" employ it. Does the account show a balance of \$14.00? What does it now indicate? If, next, he pays the balance in cash, what entry results? What does the account now show?

Set a similar problem in buying an account, and subsequently settling the same in cash.

They will now be ready to grasp the value of what, for the lack of a better term, we shall call the "Substitution Device." It is: "When a transaction does not involve cash, assume that it does; proceed to debit and credit accordingly; then substitute for cash the name of the new account."

Illustrations (if they are already familiar with the Journal, the solutions are somewhat easier):

1. Sale to Jones on account.

(a) The assumption of a cash sale gives:

Cash (debit)	[(Debit) and (credit) unnecessary, if they know the Journal]
Merchandise (credit)	

(b) By the process of substitution:

Jones	
~~Cash~~ (debit)	[Note how the substitution is made by crossing out, etc.]
Merchandise (credit)	

(c) To finished product :

Jones (debit)

Merchandise (credit)

Of course, in the beginning, and in more advanced work, mere parrot-like memory may be combated by insisting upon the reason for such substitutions.

2. A purchase from Smith on account may be treated similarly :

Smith

Merchandise to ~~Cash~~.

3. Bills Receivable (Notes Receivable). A knowledge of promissory notes is assumed, prior to the need for any book entries involving these. Let us consider the following transaction :

Sold T. Jones, on his 10-day note, 5 bbls. flour at \$8.00 = \$40.00.

After their mind is aroused to a feeling that some entry is necessary for the note, they will not be satisfied with "a," below :

(a) Cash

Merchandise

The first application of the Substitution Device will result in :

(b) Jones

Merchandise

But the final result will be :

(c) Notes

Merchandise

Now, tell them that bookkeepers employ the term Notes Receivable or Bills Receivable, instead of "Notes," so that the accepted entry becomes :

(d) Notes Receivable

To Merchandise

4. Smith, who has bought goods on account, gives us a note in full or in part settlement.

After bringing out the notion that the change from the oral or implied, to the written, promise to pay is not a real cancellation of the debt, proceed to the journalizing by means of the following steps :

Notes Rec.		
a) Cash	b) ~~Cash~~	c) Notes Rec.
Jones	Jones	Jones

Steps *a* and *b* are crutches of course. It will soon be found that the solution may be performed mentally. Eventually, the final solutions will become so familiar, by the operation of the laws of association, that the student will lose sight of the steps whereby they are derived. This state of affairs is analogous to the situation found in other subjects. For example, in algebra, the proofs of certain factoring processes are forgotten whereas the result is remembered.

The Substitution Device is an effective crutch. It should later be reconciled with, and abandoned for, the general rule for debit and credit, namely, accounts are to be debited for receipts or costs, and credited for disbursements or proceeds.

5. Discount (Interest or Interest and Discount and Merchandise Discount) is treated similarly.

Discounted Jones' \$500.00 note, due in 60 days, at Bank, receiving credit for net proceeds. (Face \$500.00, Discount \$5.00, Net Proceeds \$495.00.)

(a) Cash	\$500.00	(Is it true that you received
Notes Receivable	\$500.00	\$500?)
		(Is it true that you gave the
		entire note? How much
		did you receive for it?)

therefore :

(b) Cash	\$495.00	(Recall the basic principle of double entry bookkeeping,—debits <i>must</i> equal credits.)
Notes Receivable	\$500.00	

therefore :

(c) Cash	\$495.00	(To which account does the \$5.00 belong? Show that a record of discount operation should be kept.)
?	5.00	
Notes Receivable	\$500.00	

(d) Cash	\$495.00
Discount	5.00
Notes Receivable	\$500.00

THE TRIAL BALANCE

Consider with class, on blackboard, the result of a number of transactions. The first transaction resulted in debits and credits of equal amount, the second likewise. Hence, the sum of the first two debits equals the sum of the first two credits. Similarly, treat the third and the fourth transactions. Suppose one of the debit entries of the series was omitted. The equality disappears. An important test, therefore, is this equality. Have the class foot up the totals of the accounts in their ledger. Write these down in the usual form. This is called a Trial Balance of Totals. (Note: the technical term is not employed until the way has been paved for it.)

Why a trial? Why of totals?

This trial balance is an illustration of the mathematical axiom: The sums of equals are equal.

The real Trial Balance, the practical one, should not yet be developed. (See Syllabus.) It is inserted here for the sake of convenience.

Consider this account on the blackboard :

J. SMITH					
	600	00		200	00
	300	00		200	00

What does the debit side show? Credit side? How much is the balance? What does it denote? How did you obtain the balance? By deducting \$400.00 from \$900.00. This is equivalent to deducting \$400.00 from each side.

(Explanation: $\$900.00 - \$400.00 = \$500.00$, $\$400.00 - \$400.00 = \$0$, therefore balance = $\$500.00 - \$0 = \$500.00$.)

Next copy the Trial Balance first taught and leave two extra columns.

	DR. TOTAL	CR. TOTAL	DR. BAL- ANCE	CR. BAL- ANCE
Cash	3000	1200	1800	
Mdse.	1800	2100		300
Expense	150		150	
R. Rollins, Prop.		2000		2000
T. Jones	1800	500	1300	
J. Smith	1000	1950		950
	7750	7750	3250	3250

The Cash account shows that \$3000 was received and \$1200 paid out, therefore the debit side is \$1800 greater. Place in debit balance column. Similarly for the other accounts. In these cases make use of the principle just explained.

This is a Trial Balance of differences or balances, always referred to as *the* Trial Balance, because it is the only one used. Here derive definition.

This Trial Balance is employed by business men because they are not so much interested in how much money was received during the year and how much was paid out, as how much is now on hand, etc.

Show relation to another axiom of mathematics: If equals are subtracted from equals, results are still equal.

JOURNAL

Have the pupils make entries for a half dozen transactions dictated to them. If these transactions are of ordinary difficulty, from 30 % to 60 % will be found to have made one or more errors either of dropping a debit or a credit, or else of transposition. To avoid such errors, the journal is used. It is an *indicator*, — it indicates the entries to be made in the ledger. Here develop use of posting or checking figures, and introduce terms: journalizing and posting. Also, show importance of book of original entry, and journal-daybook combination, referred to as the Journal. The explanation in the journal should develop conciseness and exactness of expression. The test for such explanation is maximum information in minimum number of words, and the stranger's ability to interpret the entry.

THE STATEMENTS

(A) Profit and Loss Statement:

This statement and the balance sheet should be set as more frequent exercises than is usually the case.

The first few Profit and Loss Statements should not involve any inventories. Consider them as arithmetical problems in loss and gain. Use one of the previous trial balances.

Recall that the object of bookkeeping is to determine the

progress and condition of the business. The progress is the answer to the questions: "How did my business do?" "How is it getting along?" It is analogous to the term *net gain* in arithmetic. To determine it (elicit all this) compare all the accounts of the ledger which show gains or losses. The difference between the sum of the profits and the sum of the losses is the net gain (or net loss). Rapidly go down the list of balances to ascertain what each balance denotes. Assume that in a given illustration, Merchandise account shows that we bought goods amounting to \$1800 and sold them for \$2100, resulting in a profit of \$300. But in order to carry on the business we incurred expenses amounting to \$150. These expenses reduce our profits, hence the real or *net profit* is \$300 less \$150, or \$150.

The form of the statement is not regarded as of prime importance. Once the student has succeeded in grasping the essentials of a profit and loss exhibit, it has been found that he can easily adapt his mathematics to the prescribed form.

Let us now consider the case of inventories. First, ask questions which will tend to focus the mind upon the necessity of considering this item. A question such as this is of help: Bought a horse and wagon for \$300; sold the wagon for \$125. Find the loss or gain. Some ridiculous answers are, of course, to be expected. But the class will readily see that nothing can be done until the cost of each item has been determined. The method of determining the loss or gain on merchandise is suggested by the following form:

Total cost of goods bought (debit side of Merchandise account)	\$3000.00
Value of the unsold portion (Inventory)	500.00
Cost of the goods sold	<u>\$2500.00</u>

Selling price of the goods sold (credit side of Merchandise account)	\$2800.00
<i>Gain on Merchandise</i>	<u>\$300.00</u>

The procedure in the case of expense is as follows :

Amount spent for expenses during — (Expense account)	\$250.00
Value of stationery, coal, etc. not used up (Inventory)	<u>50.00</u>
Loss due to expense items consumed during —	\$200.00
\$300 minus \$200 = \$100, net gain	

(B) Balance Sheet (Statement of Resources and Liabilities, Statement of Assets and Liabilities) :

It is best to defer the term "Balance Sheet" until the books have been closed, for until then the name is an arbitrary one.

Now that we know the progress of the business, *i.e.*, how much was made, we are ready to attack the other problem, *viz.* that of the *condition* of the business. How much is the business worth now? Set this to pupils in the form of a problem in arithmetic. They will proceed as follows :

The proprietor invested	\$3000.00
His net gain is	<u>100.00</u>
Therefore the proprietor now has	\$3100.00

We will here describe, as briefly as possible, one of our means of directing the minds of a class of young students to the consideration of the problems involved in the business and financial statements. In illustrating the Cash account in the first lesson we may have referred to Robert Lake, who decided to sell, say, the *Thursday Evening Post*, in order to make some money. As we followed his progress, he had bought a bicycle to assist him in covering his route, had established a good reputation so that the news agent would

deliver his magazines to him and wait for payment until the following week. Bob also had a number of customers who paid him by the month. In ascertaining Bob's net gain, as the business increased in complexity, the class saw the need of considering the unsold magazines which could be returned at cost, and his various expenses such as postage, car fares on rainy days, bicycle repairs, etc.

This simple illustration is also of help in establishing the Balance Sheet. After finding how much Bob was worth by the method already shown, we get the class to attempt another solution from a Trial Balance of Bob's business shown on the blackboard, to which is added the inventory of his unsold stock. Besides the expense accounts the Trial Balance consists of Bob's investment account, the bicycle account, the accounts of his customers, and the balance due to the news company. In the simplest forms, the present worth consists of the cash balance. Subsequently, there is added to this the inventory of unsold magazines, the value of the bicycle, and the customers' balances. From the total there is deducted the credit balance due to the news company. The inventory is further elaborated by the addition of such items as unused postage and stationery. It may be said, in passing, that this illustrative work takes very much less time than might be inferred from the space required for its description here.

After this has been done, by questions such as those which are suggested by the items taken into consideration when discussing the richness of a country (its resources), we derive the term Statement of Resources and Liabilities, or, better, Statement of Assets and Liabilities. But as the illustration is only a means to an end, it should therefore be followed up by an exercise or two on the drawing up of such statements.

Closely following upon this work is an exercise of great disciplinary value. Each student should have before him a Trial Balance, the inventory items, and the resulting statements. If time permits, it is well to have these on the blackboards also. Assign the task of finding any item in the Trial Balance which does not appear on either of the two statements. Pupils will point out the proprietor's account and the items to which the inventories refer. Consider expense account. Which amount appears in the Statement of Assets and Liabilities? Why? Notice that every item in the asset column of the Balance Sheet denotes something of value to the business; every one in the liability column, something that the business owes. Hence everything of value owned by the business is an asset, everything owed is a liability. The difference between what the business *owns* and what it *owes* is the present worth. This present worth is the proprietor's net investment plus the net gain. It may then be seen that every item on the debit side of the Trial Balance (taking inventories into consideration) is either an asset or a loss. Test: Does this item represent anything of value belonging to the business? If it does, it is an asset; if not, it is a loss. Similarly, on the credit side, every item is either a liability or a gain. These conclusions need not be memorized if two type accounts are constantly used as touch stones:

Cash account for assets and liabilities (a debit balance is a resource; a credit balance, a liability).

Expense account for losses and gains (a debit balance is a loss; a credit balance, a gain).

FORMULAS

The previous exercise should lead to certain formulas. The value of such expressions is not generally recognized in

the teaching of bookkeeping. Here full play to the inductive process is to be allowed. As a result of their profit and loss statement they should derive $G. - L. = N. G.$ (gains minus losses equal net gain).

The balance sheet should lead to $A. - L. = P. W.$ (assets minus liabilities equal present worth).

The following formulas may also be derived :

$$L. - G. = N. L.$$

$$N. I. + N. G. = P. W. \text{ (net investment plus net gain equals}$$

$$N. I. - N. L. = P. W. \text{ present worth).}$$

$$P. W. - N. I. = N. G.$$

$$N. I. - P. W. = N. L.$$

It is understood, of course, that not all of the above are to be taught in a single lesson, but each in its appropriate place.

In this connection, or perhaps in the lesson on Balance Sheets, the distinction often pointed out by Professor Sprague must be emphasized. It is not true that in the Balance Sheet, or anywhere else except under the most unusual circumstances, that the assets are equal to the liabilities. The true equation is $A. = L. + \text{Proprietorship.}$

INTRODUCTION OF SPECIAL BOOKS

The Sales Book. — The cash book is usually presented first, but all must agree that the sales book is the simpler of the two.

Method. — Give a list of six sales transactions, and request their journalization and posting. Now consider the credit side of Merchandise account (or Merchandise Sales account). What is the total? Ask for suggestions to simplify the posting operations. Some will offer to post the total from the journal in a single amount. Is this practicable in view of

the fact the sales are not usually successive entries as in this case? Why not reserve a few of the journal pages for sales? Then, why repeat "Mdse." for each credit? Can it be indicated in some other way? How about writing on the top of this reserved section of the journal "For each of the following items credit Merchandise account"? Then show the Sales Book in the text and frame questions until the book is understood, including the posting of the totals. Follow this up by having the six transactions entered in the sales book and posted. Other similar exercises may be set, if necessary, before assigning a set involving the use of the sales book.

THE CASH BOOK

In a manner analogous to the method already shown, deduce the desirability of segregating the cash items of the journal so as to avoid the necessity of writing "Cash" for each transaction and the posting of each separate item. The next step is ordinarily found a difficult one.

Assume that one entry in the journal is:

Cash	Ck. on account	\$100.00	
R. Smith			\$100.00
and the other:			
Expense	April store rent	60.00	
Cash			60.00

The question is how to utilize the journal so as to avoid the repetition of the term "Cash" and the individual postings. Pupils will soon see the need of separate pages for cash receipts and cash payments. It may be necessary to tell them that the left side should be used for the receipts while the adjoining page should be employed for the payments. Arrange this roughly on the board, and get them to see that

omitting the cash balance, a cause of prolific worry to the beginner.

INTRODUCTION OF SPECIAL COLUMNS

Special columns in the cash book offer no great difficulty. We suggest a column on the credit side for expense account at first. Direct the attention to the cash book and to the fact that, say, eight separate postings to expense account were made. Next ask for suggestions to simplify the work, referring to previous simplifications. If necessary, hint at the second money column which had previously not been used at all except for closing totals. The posting of the total of expense and its addition to the general column can be handled easily, and offers no difficulties.

We believe that discount on sales should be the account for which the next special column should be introduced. The process has been indicated in connection with the expense column. The matter of posting alone requires special consideration. Here the journal form, as in so many other cases involving bookkeeping reasoning, will be of aid. Consider the first item. If no cash book had been used, the journal entry for the transaction would have been of the following type :

Cash

Merchandise Discount

R. Jones

Evidently Merchandise Discount account is to be debited. The conclusion is thus clearly indicated: the total of the entire column is to be posted to the debit side of the account. In this connection, it is often the case that some student thinks he has discovered an exception to what he will probably call

the rule of posting, viz., items from the debit side of the cash book must be posted to the credit side of the account indicated. A little questioning will soon clear up the doubt.

CONTROLLING ACCOUNTS

It would be well for the teacher who is not familiar with accounting to look up the theory of controlling accounts. The advantage of this device need not be enumerated here. It will be sufficient to suggest that the need and method of operating these accounts may easily be developed by employing the methods previously outlined. The subject will be treated of more fully in the next chapter dealing with Accounting.

CLOSING THE BOOKS

Most teachers find the closing of books a most unsatisfactory series of lessons. If the reader, who is familiar with the teaching of bookkeeping, stops to consider the problem for a moment, he will find in the apparent difficulty involved an example of what we meant in one of the earlier paragraphs by the unsatisfactoriness of copying models and learning by rote.

Let us assume that the pupils are already familiar with the balancing of the Cash account or the cash book, or both, and know that the bringing down of the balance is a matter of convenience. Also, that they know the conventional meaning of the single line (in bookkeeping the sign of addition) and the double line (completion and extended sign of equality between the sides). They have also practised the convention of closing on the same line by keeping their rulers fixed while marking the lines in the debit and credit columns. It is quite immaterial whether red ink or black ink is employed

in the ruling process, aside from the æsthetics of the question, for there is a noticeable tendency to do away with red ink in modern commercial houses.

The statements should be before the class. These show the condition and the progress of the business. Let the class observe that the proprietor's account does not agree with the present worth. In order to reconcile these two it is necessary to add the net gain to the credit side of this account. But how shall this be done? Some will suggest that you merely write it there. How about disturbing the equality between the debit and the credit sides as revealed by the Trial Balance? In this way show the need of some systematic way of getting the ledger to show the condition as exhibited outside of the books, in the statements. The final purpose of the Merchandise account is to show the profit on trading. What was done with this gain in the statement? In the ledger, we must open a temporary account known as Loss and Gain, to which we carry the separate losses and gains in order to determine the net gain. To transfer this gain from the Merchandise account to the Loss and Gain account make the following journal entry :

Merchandise.	(To transfer the gain shown by
Loss and Gain	Merchandise account, to the Loss and Gain account.)

If Merchandise Purchase and Merchandise Sales account were used, one would be transferred to the other in a similar way.

In an analogous manner, we close other accounts showing losses and gains. It is thus seen that red-ink entries are not necessary. They may be used, of course, but their explana-

tion is artificial and not in accord with modern accounting principles which require full explanations for all entries.

The Loss and Gain account now shows the net gain. Who is entitled to it? How can it be transferred to the proprietor's account? Use the journal entry form, the question suggests.

Those who know how to balance a Cash account, will find no difficulty in closing the proprietor's account.

When inventories are given, the work just outlined is more complex, but the principles are the same.

Not much has been said thus far about the closing of personal accounts. Entirely too much time is spent on this subject. The reasonably extensive business experiences of the authors incline them to believe that very much less of such closing is required in business than would be indicated by the time usually devoted to it. It is a question of values. We advocate that personal accounts be not closed until much later in the course than is usually the practice.

DRAFTS

Inasmuch as a full discussion of the business practice side of drafts will be found in another connection (p. 138), we here assume that this phase of the subject has been presented before the question of proper bookkeeping entries arises.

(A) *Bank Draft*. — Receipts of bank drafts are handled just as checks and money orders. When we send them, the explanation space is the only place where the difference between such a remittance and a check is shown. The charge, if any, is debited or charged to Expense account or to Exchange account or to Collection and Exchange account.

(B) *Sight drafts* drawn by us or on us offer no difficulty.

(C) *Time Drafts*. — (1) Drawn by us in our favor to facilitate collections.

This is equivalent to a written promise to pay us a certain sum of money. But such promises are called Bills or Notes Receivable. Hence the entry.

(2) Drawn on us in drawer's favor. These are equivalent to Bills or Notes Payable, and should be treated accordingly.

(3) Drawn by us in favor of a third person. Analysis will disclose that this transaction is equal to two others; a promissory note received by us from the drawee, and then transferred, by indorsement, to the payee. Show that the entries for the latter transactions include a debit and credit of the same amount to Bills Receivable account, and that as these entries just cancel each other there remains the charge to the payee and the credit to the drawee or acceptor.

(4) Drawn on us in favor of a third person. This transaction is equivalent to No. 2 above. Emphasize the fact that the payee is virtually the agent of the drawer, and that it is immaterial to us to whom the actual delivery of the payment is made, provided it is on behalf of the drawer. An analogous point should be brought out in connection with No. 3.

As an aid to the pupil's understanding of three-party drafts, questions should be framed directing his attention to the business relationship existing between the parties before and after acceptance. A good drill consists of requiring the entries for all the parties involved at the time the draft is drawn, accepted, discounted, paid.

EXERCISES IN THE CONSTRUCTIVE IMAGINATION

Before concluding these lessons, we wish to illustrate how this valuable faculty may be developed in the bookkeeping room. Only a few examples will be given because the reader can readily think of others for himself.

Fill in the explanations for the following entries :

(a) Expense	(b) Expense	(c) Expense
Cash	Merchandise	Merchandise
		Cash
(d) Salary	(e) Horses & Wagons	(f) Cash
Merchandise	Smith & Co.	Expense

It is not necessary that all of these entries be the result of probable transactions; it is an exercise sufficiently potent of good if the students utilize their imagination to the extent necessary to supply the explanations called for. The fact that there is a possibility of many different solutions adds to the value of these exercises.

Another set consists of two Balance Sheets at the end of two periods. The problem is to find what tendency the business exhibits by the changes shown. If the statements are simple enough, this exercise does not trespass on the domain of elementary accounting.

Another set of exercises consists of the setting for solution of original problems. The results should always be stated in journal form because of the tangibleness of such entries, and the ease with which they may be transferred to the special books. A few suggestions for such exercises are the following :

1. A partner who is entitled to cash salary, but who does not draw it.
2. Donation of goods to some charitable institution.
3. A customer who has been overcharged requests and receives an allowance.
4. Where controlling accounts (Accounts Receivable and Accounts Payable) are kept, purchasing goods from a customer to fill out an order.

5. As an accommodation, exchanging of checks or notes.
6. Goods destroyed by fire not insured, or goods stolen.

SPECIAL DEVICES

The successful teacher draws upon his entire world experience to enrich his class-room work. Just one suggestion to indicate how apparently extraneous matter may be made to serve his purposes. In his college mathematics he became familiar with graphic algebra. How few of us have ever thought of utilizing this knowledge! Yet a few exercises in plotting curves would put a most valuable power at the service of our pupils. Their familiarity with this subject would enable them strikingly to illustrate the efficiency of salesmen, the tendency of factory costs, the progress of the business over a period of years, and many other important business matters.

THE ETHICS OF BOOKKEEPING

We have come to agree that every oral recitation, and almost all written work, should be a recitation in English. We have yet to learn the value of the various commercial subjects as indirect means of moral training. A single illustration must suffice to open up the possibilities of bookkeeping as a study which has its informal bearing upon the moulding of the ethical man. Some of our students will copy from their neighbors (who have different price lists). Some of them have been known to force their balance! But some subsequent transaction, some later statement, will reveal an inconsistency which will eventually point out the source of error as residing in some previous careless or dishonest step. The fault, whether it be of morals or of the will, must inevitably cause trouble. We cannot escape it. This ethical lesson of bookkeeping is made available in the class room sooner or later.

The teacher who is awake to his full duty will make the most of his opportunity.

CONCLUDING REMARKS ON SPECIAL METHODS

(A) *The Class-room Recitation.*—Inasmuch as some part of the work in bookkeeping must be done at home, it becomes of moment to decide what division shall be made with reference to class recitation and home tasks. As a general proposition all new work should be developed in school. We know of no greater incentive to serious effort on the part of the student than that which comes from the emulation fostered by the oral recitation. We advocate that the problems involved in the transactions should be solved by the pupils at home or on the blackboard, and that these solutions should be criticised by the class. The writing up of the books could very properly be done at home, subsequently. No extended comment need be made, we think, regarding the necessity for some individual instruction in this subject. We venture to predict, however, that the vicious practice of all individual work, so long deemed the only means of imparting a knowledge of accounts, will soon give way to the orderly class-room method which obtains in other subjects of the curriculum.

(B) *Preparation at Home.*—As was stated under the last heading, the home is the place *par excellence* for the entering of transactions, the posting, and most of the routine work. It is true, of course, that all home work is open to the possibility of fraud. But it has been our experience that the development of a proper *esprit de corps*, and the right kind of a talk or two, will remedy the potential evil of copying. Whenever it is expected, and when other means fail, a little skilful questioning on the work not done honestly will reveal the futility of the practice and discourage it. The general principle

which should decide the teacher in the separation of home from class tasks has already been given. It may be restated in a different form. The recitation period is too valuable to be taken up for work which may just as well be done away from the instructor's supervision. But nothing that has been said here must be construed as in opposition to the doctrine that eternal vigilance is necessary in order to keep our students in the right path. Their work must be inspected constantly, so as to nip carelessness in the bud and error in the making, for all of us recognize how much harder it is to turn over a new leaf than to commence properly.

(C) *Reviews*. — Teachers have often admitted that reviews are so trying and hard, that they either set examinations in lieu of them or else just continue the course. But reviews are pedagogic necessities; so, because of their exceedingly great value to clinch the essentials of a series of lessons and to enable the instructor to know how effective his teaching has been, this chapter would be incomplete without some consideration of the topic.

Let us first distinguish between quizzes and reviews. The former consists of a series of questions on work previously taught, arranged in any manner, without any necessary recognition of that which is of permanent value; and, except in professional schools, it is usually associated with coaching and cramming. Even under the most ideal conditions its chief function is to test. On the other hand, the review is a most important aid to the teacher. It enables him, by a series of well-planned questions, graded in the order of logical development, to emphasize the principles of a topic, and to drive home the general ideas connected with a subject rather than the details. It is the means whereby the last appeal to the permanent memory is made; it aims to bind the associa-

tion processes in the final attempt to make *this* matter an organized part of the mind. Hence, it is not enough to plan a series of questions to which answers are expected; the teacher must so elucidate these replies that the subject-matter is assimilated by the class.

(D) *Examinations.* — The subject of formal examinations has been much discussed of late. Many arguments have been advanced against them; probably as many have been offered in their favor. The evils of cramming may be avoided, and as some sort of tests are almost universally accepted as necessary, it behooves us to prepare such papers as will minimize the bad features and embody all of the good ones.

Teachers of bookkeeping are fortunate in that their subject lends itself to examination which really tends toward development of power on the part of the student. It is well to have some examinations come unexpectedly so as to prepare pupils for the emergency calls of real life, but with these we do not now concern ourselves.

Formal examinations should come after reviews. They then make possible the expression without which the impression is always more or less vague and indefinite. In this sense, they are a positive teaching aid. The questions should not consist of definitions and rules, because preparation for these foster the cramming process. They should consist of problems which require real thought. For example, the preparation of statements from trial balances calls for discriminations and comparisons. Such questions as "Why does the expense account show a debit balance?" is of greater value than "Name two accounts which always show a debit balance." The first calls for reasons, the second may be guessed at or easily crammed for. Instead of setting questions on journalizing transactions which are familiar, make pupils

apply their general and fundamental knowledge by proposing such work as that contained in the section, Exercises in the Constructive Imagination, page 189.

The relative weight which the final examination results should have in comparison with that allowed for class recitation and book work cannot be decided easily. It appears to us that it is unwise to give the former greater importance than is attached to the term's work. But as this subject is more a matter of school policy than of class management, it is perhaps better not to discuss it here.

SYLLABUS

The following syllabus is offered as a suggested course of study for schools which offer the course outlined on page 53. It is not expected that every teacher will wish to follow the order here outlined, but it may be said in passing, that the sequence is the one we decided upon after ample experimentation. Reviews and tests are not indicated, because many conditions arise which make advance plans for them inapplicable.

It is presumed that exercises involving the topics to be studied are available in the form of text-books or otherwise.

Exercises requiring special journal entries for unusual transactions, and for such matters as consignment, shipments, etc., are not inserted, because it was deemed best to leave this matter to the ingenuity of the individual teacher.

(A) *Cash Account.* Debit and credit. The account. Merchandise and expense accounts. The ledger. Principles of double entry book-keeping. Proprietor's account. Trial balance of totals. Buying on account. Cash payments in settlement. Selling on account. Cash payments in settlement. Buying and selling on account with part payments and subsequent settlements. Trial balance of differences. Exercise in profit and loss. Exercise in present worth. Relation between

these two. The journal. Posting. Exercise in profit and loss, etc., involving merchandise inventory. Notes Payable account. Notes Receivable account. Discount account (Interest and Discount account). Compound journal entries. Merchandise Discount account. Inventories involving expense accounts. Closing of books. Sales book. Cash book. Check book. Bank Pass book. Bank drafts received and given. Special columns in cash book: (1) Expense, (2) Merchandise Discount on sales, (3) Merchandise Discount on purchases. Special column for cash sales in sales book. Bill book. Two-party draft drawn on us. Drawn by us. Three-party draft drawn on us. Drawn by us.

It is our belief that the work thus far should not involve the "budget" or "vouchers." The presentation of the above, with time for review, and with the use of practice sets such as previously outlined, should take from five to six weeks of the time shown for bookkeeping in the second year of the course outlined on page 53. Though we recognize the value of the pedagogic doctrine which emphasizes the learn-to-do-by-doing slogan, we are not carried away by its pleasing sound. Our experience justifies the emphatic stand we take against introducing the vouchers too early in the course. Nor will the pupil lose very much by not having the business forms at once; for aside from the compensating advantage accruing to him from the concentration on the bookkeeping alone, it is to be remembered that he has had much practice in the very forms included in the budget.

A good set, calling for the use of all ordinary business papers involved, should next be worked. It should not take more than three weeks at the utmost. That this period is sufficient should be clear to those who recall our tests of a good set. Is it not a fact that ten invoices carefully handled are as efficient as forty-three?

(B) *Single Entry*. Books used. Show dependence on double entry. Proof balance (instead of trial balance). Change to double entry.

Comparison between the two systems. No business forms need be employed.

(C) *Partnership*. Historical introduction. Importance of articles of agreement. Opening entries: (1) Cash investment, (2) complex investment, (3) combining two single proprietor concerns (neglect closing entries). Salaries of partners. Personal drawings. Dissolution. Change from single proprietorship to partnership. Admission of another partner. Here introduce Accounts Receivable and Accounts Payable, the special columns involved, and the special ledgers.

(D) *Corporations*. Historical introduction. Opening entries involving such accounts as Subscriptions, Capital Stock, Unsubscribed Stock. Change of single proprietorship to corporation. Change from partnership to corporation: (1) Opening of new books, (2) closing old books (skip to senior term). Transfer of stock. Dividends. Introduction of new books involved. (See law of your own state for essentials.)

After the first business practice set, such additional sets should involve special kinds of business. Two general principles should decide our choice:

(a) A business of such a general nature that its principles once grasped become available as an easy introduction to another.

(b) The special needs of the locality or of the pupils in the class.

According to the selective principle involved in "a," a retail trading concern, such as a grocery or provision house, should be chosen. In addition, the books of a wholesale concern, such as a dry-goods dealer, should be studied. This should be followed by a set illustrating the contracting business, — for example, that of a builder. The last of the general sets should involve some manufacturing line, so as to introduce the elements of cost accounts. Here it may not be amiss to caution the inexperienced teacher against giving all of the so-called voucher system of accounting as is shown in a number of the more popular texts. Any acquaintanceship

with actual business conditions will reveal the tendency to reduce much of the work shown by the book vouchers, and, moreover, the subject is better treated in the accounting course.

Our final word is in regard to the special sets which the school may offer. It is obvious that the demands of every one cannot be supplied. The general principle, however, is simple enough. Decide upon the "sets" you can offer, and allow them in groups; for in this advanced work, individual instruction should have its fullest scope. The material now generally available will permit the giving of courses in banking, stock brokerage, professional accounts, the accounts of trustees and executors, commission and department store accounting. Finally, some member of the section engaged on a special set should report on its salient features to the entire class.

SUMMARY

It is wrong to assume that because the principles of a subject remain unchanged that the practices growing out of principles are static. Bookkeeping, in order to meet the requirements of modern business, is undergoing rapid changes. The modern teacher, in order to remain efficient, must keep abreast of the times. But though the forms of books and the kinds of accounts may undergo change, the basic aim involved in the teaching of bookkeeping is quite fixed. As a matter of fact, the first problem which a successful teacher must solve concerns itself with the purpose, aim, or motive for the teaching of bookkeeping.

Modern educators are agreed that not because of its utilitarian value alone, but also because of its disciplinary value, bookkeeping deserves the position of major subject in the commercial course which it now occupies.

Most of the present chapter is devoted to a discussion of the methods of presenting the subject of bookkeeping. The deductive method proved stultifying, but the inductive was found most fruitful of good results. Rules should be evolved by a process of discovery, and mere memoriter work should be discouraged. "That which one understands, one need not memorize."

A number of model lessons are presented. These take up, in outline, the first lesson in bookkeeping, debit and credit and double entry; the trial balance; statements; the use of formulas; special books, and special columns in books of original entry. Exercises in the constructive imagination, the use of certain special devices, and the ethical value of bookkeeping instruction are included in the chapter. The syllabus which concludes the chapter will be found to meet the requirements of the best business courses.

EXERCISES

GROUP ONE

1. In presenting the subject of bookkeeping, what motivating devices would you employ? (How would you show that the subject is worth while?)
2. Discuss the relative merits of the account method *versus* the journal method of introducing bookkeeping. (16)
3. How would you employ the blackboard during the bookkeeping recitation? (24, b.m.)
4. In selecting the text-book, what features would appeal to you most?
5. What use would you make of a text-book in bookkeeping?
6. Prepare an outline for an oral review of the Sales Book.
7. Discuss the value of formulas, with special reference to book-keeping.
8. Write an essay of about two hundred and fifty words on the ethical value of bookkeeping.

9. Which do you favor, individual or class instruction? Give your reasons in full.

10. Discuss the budget or business practice method of bookkeeping. State its strong points and its weak points.

GROUP TWO

1. Outline the first ten lessons in bookkeeping. Present a plan in sufficient detail to enable a young teacher to conduct a class in accordance therewith.

2. Assume that a beginner's class was divided into three groups of fifteen pupils each, and develop a plan whereby all pupils would progress as a unit, while weak pupils would receive special attention and strong pupils would obtain sufficient drill.

3. Outline, in full detail, a lesson on the Cash Book.

4. Criticise the syllabus in bookkeeping of any high school with which you are familiar, and suggest remedies.

5. As a result of a survey of the New York public school system the Hanus Committee contributed a number of reports. Among these, the Thompson Report deals with commercial education. Obtain a copy of this report, and apply its conclusions to the school system with which you are connected.

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CHAPTER VII

ACCOUNTING

COMPARATIVELY few people are able to distinguish between bookkeeping and accounting. As a matter of fact, the two terms are very often employed synonymously by the business man. This confusion has been aided by those who should know better, as witness the self-styled "expert accountant," "public accountant," and other such appellations employed by bookkeepers who wish to lend the impression that they are as qualified as the certified public accountant whose ability has been attested to by state officials competent to pass judgment in such matters. But despite the absence of a clearly defined line of demarcation between the work of the bookkeeper and the sphere of the real accountant, an attempt will be made to clarify our ideas regarding these terms. We quote from a recent pamphlet: ¹

WHAT IS MEANT BY AN ACCOUNTANT?

He is not an expert bookkeeper, though every accountant knows bookkeeping thoroughly. He devises and installs systems of accounts, and, having done so, the bookkeeper continues the task of "keeping" the books — that is, recording the transactions of the business. Then, the accountant reviews or audits the work to establish its correctness. In times of uncertainty, or whenever unusual conditions arise, he is called upon to act as an investigator and as a commercial or business counsellor.

Another way of approaching the subject under review, that is, the difference between bookkeeping and accounting, is to

¹ "Accountancy and the Business Professions," by Joseph J. Klein, prepared for the High School Teachers' Association of New York City, New York, 1911.

consider the points of view from which the bookkeeper and the accountant each regards the transaction arising for treatment. The bookkeeper knowing that the basic principle of his science is the maintenance of debit and credit equality, is satisfied by an entry for any given transaction which results in such an equation. The accountant, while also observing the fundamental principle of double entry, goes a step further. He not only insists upon the equality, but also upon the charge or credit to the correct account or class of accounts. In other words, the accountant is continually on the alert for a distinction between capital and income. An illustration or two will be of assistance now. After using a shop for a time, it is found that it requires painting. The expenditure amounts to \$200.00. The bookkeeper would credit cash, and, in many cases, would be satisfied with a debit to some such capital or real account as Building, Plant, or Real Estate. The charge of the accountant would be to an income or nominal account as Repairs or Expense. One other example may prove profitable. The cost of shoeing or stabling horses is sometimes charged to an account of the form Horses and Wagons, whereas it should be entered in the Stable Expenses account.

This distinction between capital and income is of prime importance. It has been made the subject of legislation by public service boards and railway commissions. The confusion of classification has enabled bankrupt corporations to declare dividends, has helped to create so-called secret reserves, and, when due to ignorance, has been known to lead to further loss in ventures which should have been discontinued long before.

The failure clearly to differentiate between these two important divisions of accounts may be understood in another

way. Inasmuch as the bookkeeper aims at a trial balance while the accountant works for the balance sheet, we can easily see why it is that the former often errs in the manner indicated. A charge to an incorrect account will *not* be disclosed by the trial balance, but will make a difference in the showing of the amount of profit for the period under review, and therefore on the balance sheet. We may thus sum up the great distinction between bookkeeping and accounting as residing in a difference in the ends aimed at, — the former striving for a trial balance and the latter for a balance sheet. Quite unconsciously, too, the texts on our subject corroborate our conclusions. Elementary bookkeeping books almost invariably illustrate by means of journal, or what is practically the same in result, by means of ledger entries; Professor Hatfield, in his remarkable work on *Modern Accounting*, adheres to balance-sheet results throughout.

We recall that not so very long ago it was held that when a town or county had made provisions for a free elementary school education, it had cancelled all obligations in one direction. High schools and colleges were only for those who were able to pay for tuition. In this matter of free education a great change has come over the country. Many communities provide free college opportunities, though sentiment is not yet universal in this matter. Industrial education, together with a realization that a country can make no better investment than in a general educational uplift, has paved the way for inclusion in our general scheme of free education, of subjects which can be applied to the earning of a livelihood. It is true that not many communities offer free professional training except for teachers, nor do we stand ready to advocate what is apparently a radical departure from current practice. But we must give some attention to the tendency to modify

the high school curriculum so as to emphasize more largely industrial and commercial training.

Notwithstanding the fact that many private schools teach bookkeeping and other business subjects, many cities and towns feel justified in offering what at first sight appears a duplication of these private activities. That the duplication is not real is known to all who are in a position to compare the cultural and practical work of the modern high school with the narrow technical courses of most private business schools.

But though no defence is any longer necessary on behalf of bookkeeping as a proper subject of instruction in the free high school, does the argument apply to accounting as well? Yes and no. It would not apply to a professional course in accounting for a reason which the authors do not personally sympathize with, but which excludes courses in law, medicine, and engineering, for example, from our free-school systems. But a one-year course in accounting, such as outlined in our suggested syllabus, cannot be excluded on the ground that it is professional. Just as communities feel justified in offering work in commercial law, physiology and hygiene, and in the elements of mechanics or drafting, they are also justified in offering the course in accounting which we suggest for the last year of the high school course.

The reasons, then, for the inclusion of accounting in the curriculum may be summarized both negatively and positively. In the first case, precedent exists for the giving of such work in the fact that many localities are already engaged upon similar work bearing a like relationship to corresponding professions as does this one to public accounting. The positive argument is by far the stronger, and would exist even in the absence of a pronounced tendency in the direction of a more liberal policy toward universal education at the common

expense. Germany has shown how general training in all practical lines reacts to the advantage of the community. In a thousand and one ways would the general understanding of accounting react to the country's good. The examples which suggest themselves would carry us too far afield. A few must suffice us. Such training would do much to decrease the number of dupes who are annually ensnared by meaningless statements and prospectuses issued by fraudulent mercenary operators and other schemers. In civic progress, too, the beneficial results would be felt. The demand for proper municipal accounting would soon become too insistent and impatient to be longer ignored, and the responsibility of public officials could then be more accurately and correctly gauged.

If it is now clear that accounting should be included in the high school curriculum, and if, furthermore, its great importance has been established, why should it not be offered rather in the first year of the course than in the last? This question might be asked us by those familiar with the fact that over 50% of those who enroll in our public high schools drop out by the end of the freshman term. Obviously, accounting cannot be studied without an understanding of bookkeeping, so that this prerequisite imposes the necessity for relegating the study of the more advanced topic to a later period of school life. Moreover, an appreciative understanding of accounting presupposes a certain maturity not present in boys and girls prior to about their senior year of the high school course.

Realizing that the distinction between bookkeeping and accounting is sufficiently real as to warrant separate treatment of each, and having established the fact that the latter subject should follow the former, a concluding line of inquiry remains for treatment. This final division of the present chapter

is to discuss the subject-matter of accounting suitable for high school purposes, and its method of presentation. We shall first outline what we believe to be the proper content of the course, and then treat of the methodology involved.

Balance sheets and various statements should be studied intensively. The distinction between capital and income should be emphasized. Single entry should be contrasted with double entry, and the change from the first system to the second should be assigned as an exercise. The changes from single proprietorship to partnership and from both to the corporate form of organization, together with the organization of new corporations, should occupy a large part of the time apportioned to this course. The principles underlying controlling accounts should be thoroughly mastered. Statement of affairs and the simple proceedings connected with bankruptcy should also receive attention. Cost accounting should be treated in an elementary way, while the accounting of executors and of social or other organizations should not be ignored.

It is believed that what has just been so briefly outlined should form the maximum limits of a course for high school pupils. The understanding of the reason involved rather than the ability to reproduce forms should be the criterion of success in this work. Less work more intensely pursued and more thoroughly mastered, rather than more work generally treated, constitute a safe guiding motive.

Now how shall the subject-matter be presented so as to realize the ideals we have set before ourselves? In order to approach the methodology properly, it is well to consider two points; namely, the calibre of our pupils and the aim of our instruction. We realize that the student of accounting has already had two years of bookkeeping, during which time he

became familiar with the principle of double entry, with the detailed operations involved in the organization, construction, and dissolution of simple concerns, and with the drawing up of business and financial statements. Unfortunately, the very nature of the situation precludes the possibility of a thorough grasp of all the work involved; but, more happily, it will be found that the student's attrition with the items handled has left him a residuum upon which we may safely rely and which we may confidently employ as a foundation for the superstructure of accounting. The aim we have already developed at sufficient length, so we need only recapitulate it in the briefest terms, — a desire to understand the purpose of accounts, the interrelationship of accounts, and the ability to read and prepare the more ordinary business statements. And as a final word regarding the aim of the course, we must include a conscious desire on our part to instill a longing for further study to the end that our graduates shall not content themselves with being mere cogs in the great office machine of commerce and industry, but that they strive to attain the higher possibilities involved in accountancy as a profession.

METHODOLOGY

Just as it was found impossible to treat fully of all the details in the course in any subject, so it is impractical to attempt a complete compendium of method for all the topics included in this subject. We have already suggested how to develop the important difference between capital and income, and we now leave the subject by indicating the conclusion resulting from a failure so to differentiate. This conclusion differs somewhat from the more general and more philosophical one previously arrived at, but it is of more service for the purposes of the high school pupil. Were we, for example, to charge

the cost of each year's painting to the Building account or the amount of each month's horseshoeing or horse stabling to the Horse and Wagon account, it is readily seen that the respective assets would grow more valuable as the building grew more dilapidated and old and as the horses became aged and feeble. This form of attack is similar to the *reductio ad absurdum* of geometry, and may be developed by Socratic questioning.

BALANCE SHEET

The reader is now asked to consider the balance sheet. Two important points are selected for present treatment. One deals with the reason for calling the statement a balance sheet, the other with the need of segregating the individual items according to some general plan.

Select a trial balance for discussion. Assign as an exercise the closing of the corresponding books. This had resulted in the elimination of all the nominal (loss and gain) accounts, the addition to or deduction from the capital accounts of the net profit or net loss, and the addition of certain real accounts (asset and liability inventory items) which were absent, or, at least not present in exactly the same way, previously. Now assign as an additional exercise the taking of a trial balance, often styled a "proof balance" in the elementary texts. If the work has been correctly performed, the last list of *balances* will reveal a debit total exactly equal to the credit total. A comparison between these balances and those contained in the so-called "Statement of Assets and Liabilities," which should also have been prepared, will show a one-to-one correspondence throughout. It should not be difficult now to recognize the practical identity of the balance sheet and the statement. The terminology, too, should now be perfectly clear: the balance sheet contained all the

balances, hence it is a "balance sheet." The trial balance is a list of all the balances, after posting, but *before* the books have been closed. The balance sheet is a list of all the balances *after* closing the books.

Having established the rationale for the term, it is quite seasonable to consider the arrangement of the items on the balance sheet. A simple illustration may be made to suffice for the establishment of the need of a system of segregation. Assume that you had a choice of associating with either concern A or concern B, whose capitals were equal to each other, upon the investment of a like sum by you. Could you choose logically between the two? Let us see. The correct balance sheet of concern A follows:

ASSETS		LIABILITIES AND CAPITAL	
Cash	\$ 8,000.00	Notes and Accts. Pay.	\$16,000.00
Notes and Accts. Rec.	12,000.00	Capital	18,000.00
Mdse. on hand	4,000.00		
Plant and Mchy.	10,000.00		
	<u>\$34,000.00</u>		<u>\$34,000.00</u>

The correct statement for concern B is as follows:

ASSETS		LIABILITIES AND CAPITAL	
Cash	\$4,000.00	Notes and Accts. Pay.	\$16,000.00
Notes and Accts. Rec.	5,000.00	Capital	18,000.00
Mdse. on hand	2,000.00		
Plant and Mchy.	23,000.00		
	<u>\$34,000.00</u>		<u>\$34,000.00</u>

Even a casual inspection will reveal the reason for a decided preference in favor of the first concern, everything else being equal. Should A be called upon to pay off its indebtedness, it could easily do so, and have a comfortable balance left for the conduct of its affairs. But matters are quite different

with the other concern. If it realized the full amount on all its current assets, five thousand dollars of its liabilities would remain unliquidated. The evident reason for B's desire to secure additional funds is to meet an apparent deficit, while A is financially able to continue without such aid. The discussion might be prolonged indefinitely, but the conclusion for our present purpose is already manifest. A segregation of items so as clearly to set off current assets against current liabilities, and corresponding classes of assets against the corresponding liabilities, is an accounting desideratum.

The individual teacher may carry the indicated separation as far as his judgment indicates it as desirable, and he may even reverse the order about to be shown, but the point to be emphasized is the absolute need of a systematic classification. A suggested form follows:

BALANCE SHEET OF THE L. M. COMPANY, AS OF DECEMBER
31, 1913

Current Assets:		Current Liabilities:	
Cash	\$	Notes Payable	\$
Notes Receivable		Accounts Payable	_____ \$
Accts. Receivable	_____ \$		
Trade Assets:		Deferred Liabilities:	
Finished Goods	\$	Accrued wages	\$
Goods in process		Accrued interest	
Raw materials	_____ \$	on mortgage	_____ \$
Deferred Assets:		Fixed Liabilities:	
Prepaid taxes	\$	20 yr. mtge. bond	\$
Prepaid insurance	_____ \$		
Fixed Assets:		Capital and Surplus:	
Plant and Mchy.	\$	Capital Stock	\$
Tools		Surplus	
Fixtures	_____ \$	Reserve	_____ \$
	_____ \$		_____ \$
	=====		=====

SINGLE ENTRY

The transition from double entry to single entry is a very simple process. A statement to the effect that the latter system keeps personal accounts only furnishes the cue to the necessary treatment. Consider a given transaction. Do the rules of double entry result in either a charge or a credit to a personal account? If there does result such a debit or credit, it is to be entered accordingly; the rest of the solution is ignored. The conclusion is soon arrived at that in order to ascertain whether as a result of a given transaction there is to be a single entry debit or credit can be determined by the application of double entry devices and tests already known.

After learning the principle of debit and credit as employed in the single entry system, the next question concerns itself with the books employed. Under the simplest conditions a journal, a ledger, and a memorandum cash book suffice. Inasmuch as under such conditions all postings are made from the journal only, a cash item must appear twice. With the growth of business, other books, such as sales and purchase books, are added; these, together with the cash book, become posting media, and we soon see that double entry differs from single entry only in the ledger accounts kept. But a class readily sees that by means of special columns in the books of original entry, double entry involves so little extra work that no argument remains in favor of the single entry system. When the further difference between the two systems regarding the determination of the condition and progress of the business has been seen, the class will be ready for the discussion involving the relative merits of the two systems.

The change from single entry to double entry is often regarded as a difficult step. We believe that the obstacles

are more imaginary than real. Let the class have before it two ledgers, — one the result of single entry bookkeeping, the other of double entry. Elicit from them that the essential difference lies in the absence from the former of the real and nominal accounts contained in the latter. But how may the first be made like the second? Simply enough, by adding the real and the nominal accounts. After performing the necessary operations, induce the class to express what they did in somewhat the following way :

First make the last *single entry* entry, *i.e.*, give the proprietor credit for the net gain or charge him with the net loss found.

Then, copy the Statement of Assets and Liabilities into the journal, posting all those items which are not checked.

The full journal entry, in a hypothetical case, is herewith shown :

Dec. 31, 1913				
	John Doe	Cr.	568	
	For year's net gain as per statement.			
	31			
	I have this day decided to change my books from Single Entry to Double Entry. The following exhibit shows the condition of my business :			
√	Cash		1896	
√	Accounts Receivable		4304	
18	Notes Receivable		3300	
24	Mdse.		2000	
19	Notes Payable			2400
√	Accounts Payable			1800
√	John Doe, Prop.			7300
	The above balances have been posted as indicated, except those checked ; cash appears in the Cash Book, Accts. Rec. and Accts. Pay., itemized, and John Doe, Prop.'s account, are already in the ledger.			

CONTROLLING ACCOUNTS

Just as the distinction between capital and income may be said to illustrate the distinction between bookkeeping and accounting on the theoretical side, so the use of controlling accounts may be said to differentiate the two on the side of technique. The introduction of these accounts has enabled the accountant to apply various "internal checks" or "fraud preventives" without sacrificing time.

It is hardly necessary to suggest that the various practical advantages of controlling accounts should be grasped by the entire class. No teaching of the subject is complete which fails to emphasize the fact that these accounts were summaries as well as proofs, and that they facilitated the taking of trial balances. But as our experience serves to show that many pupils who know how to keep books which embody these controlling features fail to understand the principle involved, and as we believe in the principle that what one thoroughly understands one need not memorize, we propose to develop a lesson on controlling accounts for the benefit of the student and teacher as well as for the sake of the business man who wishes to obtain more light upon this subject.

For the purposes of this model lesson, let us select one of the two common examples of controlling accounts. Accounts Receivable, or Customers' Ledger Controlling Accounts as it is sometimes called, will now serve our purposes. We already know that the transactions which ordinarily affect a customer's account consist of sales as charges and of credits arising as a result of payment in cash or by note, or by a return of goods. Hence the necessity of arranging our books so as to provide for these various charges and discharges, both individually and collectively.

The sales book, or an equivalent, furnishes the medium for the debits. Each charge to an individual's account in the customer's ledger corresponds to a similar charge to the controlling account in the general ledger, in virtue of the fact that the charge to this latter account is the sum or total of the items previously posted as single items to the customers' ledger. And though the entries to the individual accounts be made daily, the sum to the controlling account is not usually made oftener than once a month. If the work has been performed correctly thus far, it follows that the sum obtained by listing all the items found in the various accounts of the customers' ledger — and they consist of charges only, as yet — will exactly equal the single item in the Customers' Ledger Controlling Account. The next comment in this connection is that the controlling account, in the condition assumed, represents the total amount owed to us on open-book accounts, while the sum of all the items in all of the accounts of the Customers' or Sales Ledger shows this outstanding amount in detail. Inasmuch as only the posting to the General Ledger affects the Trial Balance, it is necessary to offset the charge to Customers' Controlling Account by a credit for an equal amount. This is accomplished by crediting the Sales Account with the same total from the Sales Book.

But the case just reviewed is one-sided and hypothetical. The total amount just considered is reduced by various credits, and these it is our intention now to consider. Remedy: These credits, as the reader knows, consist of cash received by us, notes receivable, and goods returned to us. We shall first present the result of cash receipts, and then the effects of notes and returned sales. Before proceeding, however, it is well to observe the condition of the books at this stage. Let us assume that our books at the present moment are as follows :

Sales, Dec. 1, 1913

¹ 18	T. Jones, 2/10, n/30 (itemized)	500	00
	8		
18	T. Jones, 2/10, n/30 (itemized)	750	00
	15		
27	R. Smith, on acct. (itemized)	600	00
	29		
21	T. Williams, 2/10, n/30 (itemized)	310	00
² 7/ 2	Customers' Controlling a/c, Dr., Sales, Cr.,	} total for month	
		2160	00

In the Customers' Ledger:

¹⁸ 1913		T. JONES									
Dec.	1	2/10, n/30 S	8	500	00						
	8	2/10, n/30		750	00						

²⁷ 1913		R. SMITH									
Dec.	15	On a/c	S	8	600	00					

¹ Folios in Customers' Ledger.² Folios in General Ledger.

CUSTOMERS' CONTROLLING ACCOUNT									
Dec.	31		S	8	2160	00			

SALES ACCOUNT									
1913					Dec. 31		S 8	2160	00

Assume that we have to consider the following transactions :

- (a) Dec. 11, Jones paid invoice of the 1st inst., by check,
\$490.00.
- (b) Dec. 17, Jones paid invoice of the 17th inst., by check,
\$750.00.
- (c) Dec. 16, Smith paid on account, check, \$200.00.

Omitting "a" for the moment, we know that "b" would ordinarily result in :

Cash	\$750.00	
To Jones		\$750.00

but, inasmuch as we now have a controlling account, it must also be credited with \$750.00 in order to reduce the amount of Accounts Receivable. The problem, then, is how to arrange the cash book so as to furnish the one debit and the two credits. The class will readily see that if a special column on the debit side of the cash book is provided for all items affecting customers' accounts, each account may be credited individually, and the controlling account credited with the total of all items in this special column. This arrangement affords a solution for "b" and "c."

An apparent difficulty confronts us in the case of "a." Were we to journalize the transaction, it would be :

Cash	\$490.00	
Discount on Sales	10.00	
Jones (Customers' Controlling %)		\$500.00

The cash book arrangement previously described may be so modified as to provide a convenient medium for recording

the more complicated transactions of the type just shown. An arrangement of columns, such as the following, is usual:

CUSTOMERS' CONTROLLING ACCOUNT		DIS. ON SALES		NET	

The amount of the check is entered in the last column, the amount in payment of which it was received is entered in the first column, the amount allowed for prepayment in the second. Where no discount has been allowed, the amount received is entered in the first and third columns. Posting offers no special difficulties, if one bears in mind that the ledger result, regardless of the book or form employed for the recording of a transaction, remains unchanged. It is easily seen that the total of Discount on Sales should be posted to the debit of its account in the general ledger; that from the first column the individual items are to be posted to the credit side of their respective accounts in the Customers' Ledger, while the total is credited to the Customers' Controlling Account in the General Ledger. The net cash, that is, the difference between the first and the second columns, is the amount of cash debited, and this is found in the net column on the debit side of the cash book.

Returns of goods from customers and settlements by note remain for treatment in connection with controlling accounts. These transactions require a modification of the ordinary

journal so as to provide for crediting the customers' personal accounts in the Sales Ledger, and at the same time to furnish a convenient means of posting to the controlling account in the General Ledger. The following form (omitting Accounts Payable, at present) will help explain the use of this book :

PURCHASE LEDGER Controlling Account		GENERAL LEDGER		L.F.	<i>Dates</i>	GENERAL LEDGER		CUSTOMERS' LEDGER Controlling Account	
		500	00		Notes Rec. His 30 day note,			500	00
					N. Smith on account				
		25	00		Sales Returned goods,			25	00
					R. Jones damaged				
1000	00				R. Franklin Gave our 60-day				
					Notes Payable note on account	1000	00		
250	00				Billings & Co. Returned goods,				
					Purchases not as per order	250	00		
1250	00				Customers' Ledger Controlling %	525	00	525	00
		1250	00		Purchase Ledger Controlling %				
		1775	00			1775	00		

The reader will readily see that if the suggestions embodied in the foregoing treatment of the Customers' Controlling account be observed, a class of average intelligence should have no difficulty in grasping the principles involved. In a similar way, but with less detailed explanation, the Purchase or Creditor's Ledger Controlling account may be taught.

COST ACCOUNTS

A very important element in the recent advance made by accounting is the fact that it has been applied to the deter-

mination of factory costs. Competitive forces have made it essential for the producer to control the cost of output to the end that leaks be detected and weak links in the production chain be discovered. It is because of the importance of accounting in connection with the shop that it is deemed advisable to include the elements of this subject in such a general course as the one here planned. But how much should be included and how shall that portion be taught?

Quite obviously, cost accounting cannot be thoroughly presented. It is sufficient that the class recognize the difference between a manufacturing, trading, and profit and loss statement and cost accounts. The former is a sort of *post mortem* exhibit, — it shows the result of a period's operations. Cost Accounting attempts to keep a contemporaneous record so that not only will final results be obtainable, but so that also, at intermediate periods, the efficiency of the operations may be determined.

As illustrations of what cost accounts can accomplish, two or three well-known examples must suffice. In a certain factory it was found by the accountants who were called in that there was a great discrepancy between the weight of raw metal and the weight of the corresponding castings. The accountants pointed out that there was a leak somewhere, and the management, acting upon their advice, found that many faulty castings, instead of being returned by the workmen, were thrown away behind a fence, so as to avoid detection of the defective work. In another case, the leather employed by a certain department of a shoe factory was excessive in comparison with that employed for similar purposes in other departments. Surveillance disclosed that the men were throwing completed heels at boys who were swimming in a stream below the factory windows because the lads used to tease the workmen.

Further investigation showed that the boys sold the heels to a rival factory in another part of the town. Cost records, to mention just another instance, have shown that it was profitable to drive a drill at a speed sufficient to destroy it in a few minutes rather than to slow down in order to lengthen the life of the tool.

Now, what are cost accounts? In answering this question we also dispose of the other, how to teach cost accounting in the high school. When we learn that the essential elements of the productive activity, from the accountant's point of view, consist of the destruction of raw materials, the direct cost of labor employed, and the other more general or *overhead* charges, the problem before us is greatly simplified. In order to control the raw materials used, some form of *stores* record is necessary. The forms employed provide for a recording of the total amount purchased, the amount given out for any particular job, and the balance on hand. Wages paid out are so divided, whenever possible, as to charge each job or contract with the amount incurred on its behalf. Other costs, such as depreciation of the plant, the use of fuel and light, and the other factory costs, are apportioned in accordance with some predetermined plan. In the simplest form, the completed cost account, showing the profit on a particular contract, is as follows:

CONTRACT No. 186

Date	Materials	\$1800.00	Date	Amount of Contract	\$5000.00
	Wages	2600.00		Extras	375.00
	Factory Overhead				
	Apportioned	225.00			
	Profit	750.00			
		<u>\$5375.00</u>			<u>\$5375.00</u>

DEVISING A SET OF BOOKS

It is no easy task to devise a system of books, even for a simple business. The student should be led to see that two preliminary steps are essential: (a) the business must be surveyed so as to determine the kind of transactions which occur. The transactions will suggest the books to be employed. (b) Before the books are ordered, typical transactions should be entered upon sample rulings, so as to test the value of the proposed system.

Let us employ an ordinary trading concern for the sake of illustration. Its operations consist of purchases and sales, cash receipts and disbursements, and miscellaneous transactions. A purchase book, or purchase journal as it is sometimes called, a sales book, a cash book, and a journal are necessary. Now let us suppose that the principal purchases are made from a dozen concerns, while the number of customers is several hundred. This state of affairs necessitates a division of the ledger into a sales ledger and a general ledger, the latter including the accounts with creditors. In the cash book and in the journal special columns will have to be provided for the customers' controlling account. Other special columns will be needed in the books of original entry in order to reduce the work of posting frequently recurring items.

When a set has been planned in accordance with the scheme just briefly outlined, an essential test, already mentioned, must be applied. Take the transactions which are to be of frequent occurrence and make sure that there actually has been provided a means of easy and efficient recording. But before approving the set, it is well to assure one's self that the less usual transactions can also be handled. As a general rule it will be found that the journal will be the medium

whereby such transactions will find their way to the proper accounts.

AUDITING

The work of the present chapter would lack completeness were we to conclude without some reference to auditing. Though it is no part of the high school scheme of education to turn out finished auditors, it is nevertheless fit and proper that those in our charge recognize the kind of work performed by the auditor. Even if our students never expect to earn a livelihood by practising as public accountants, they may nevertheless be called upon to vouch the treasurer's report of an organization or a society, and such a possibility, by the way, may serve as a very interesting introduction to the subject, from the teacher's point of view.

Auditing is essentially reviewing. It consists, at least so far as the high school course is concerned, of going over the work of the bookkeeper and certifying to its correctness. Nor is this division of accounting absolutely new. In the mathematics room, for instance, checking of operations and results has been insisted upon. In bookkeeping, too, the postings have been gone over as a precaution against error, and other steps have been taken to assure correct results. An audit is a systematic checking, and because it is systematic it requires a plan. Thus, if cash receipts and disbursements are to be audited, it is necessary to ascertain that all money received has been actually deposited or otherwise accounted for, and that all payments were *bona fide* and legitimate.

But instead of merely checking cash, it is usually necessary to go over all the work. Hence the need of knowing what work requires checking. This necessitates that a list be made of the books and vouchers to be examined so that a definite idea shall be obtained of the problems to be solved, and in

order to avoid the possibility of neglecting to examine some book or class of accounts. As a final exercise, have the student audit a complete set of books which has been kept by a fellow-student. Insist that the certificate cover the correctness of the work both with respect to principle and to fraud. Have it also include a balance sheet and a statement of operations based upon the trial balance which has been prepared by the bookkeeper. The more capable student might criticise the system examined and make constructive recommendations for an improved set.

SUMMARY

There is a real distinction between bookkeeping and accounting, although it is not easy to indicate the line which separates the two. Due to the fact that it is possible materially to decrease the time which must be spent in acquiring a knowledge of bookkeeping, without in the slightest way eliminating any of the good features of the best course in bookkeeping, considerable time is now available for high school work in elementary accounting.

The course in accounting should be somewhat intensive. The principal topics which should be included are the following: Balance sheets, income statements, single entry, the change from single entry to double entry, controlling accounts, partnership accounting, and corporation accounting. If time permits, some attention should be given to cost accounts, reserves, statement of affairs, deficiency accounts, and auditing.

The methodology which is indicated is based upon the principles presented in connection with the teaching of bookkeeping. As much of the work in accounting is an extension of bookkeeping, less time should be spent upon the introductory steps. Induction, rather than deduction, however, should be the more prevalent method of presentation.

EXERCISES

GROUP ONE

1. Describe the functions of the accountant in modern industrial society.
2. Justify the inclusion of accounting in the curriculum of the commercial high school.
3. Outline the steps which should be taken in the presentation of a lesson on the balance sheet. How would you "motivate" the topic?
4. Why should double entry be studied before single entry? Discuss fully.
5. Indicate the pedagogic steps involved in a lesson on controlling accounts. Select accounts payable for illustration.
6. Should cost accounts be taught in the high school? Discuss fully.
7. What factors would determine your selection of specific sets of books for class work. Draw your illustrations from the conditions which exist in your own community.
8. Show how the high school course in auditing may be made practical.
9. What preliminary steps should be taken before installing a system of accounts?

GROUP TWO

1. Assume that the university authorities had criticised the wisdom of offering a high school course in accounting. Draw up a brief for presentation to the school authorities: (a) showing the value of the course; (b) proving its practical value; and (c) proving that it does not compete with the work offered by the university.
2. How should the methodology of bookkeeping be modified to meet the requirements of accounting? Answer so as to guide high school teachers.
3. As the head of the commercial department of a high school, select one hundred dollars' worth of books to form the nucleus of an accounting library. Briefly indicate the principles of choice which you observed.
4. Describe a system of indexing, which would make available for easy reference, books and articles on accounting.

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CHAPTER VIII

COMMERCIAL GEOGRAPHY

ITS PLACE IN THE CURRICULUM

THIS term, in its larger sense, includes, as we have seen, a study of the way in which man, by his industry, has subordinated the forces of nature to his use. It includes, therefore, a study of the natural resources of the earth and a study of how man, by his labors, has utilized these resources to his own advantage and to the advantage of his fellow-men. The study is, or ought to be, the most cultural subject in the commercial curriculum, because it gives the student an insight into the nature of all those activities which give rise to man's industry in relation to the material world. In this sense, therefore, it is the broadest of all the subjects of the curriculum.

Unfortunately, there is no subject of the course which has been taught more poorly than commercial geography. This has been due partly to a misconception of the aim and content of the subject, partly to the difficulties of handling the mass of material, and partly to the lack of culture of those who have taught the subject.

The greatest difficulty has been due to the fact that information has been made the end of the study, rather than organization, interpretation, and the relation of the subject to the real activities of business. The mass of material included in commercial geography cannot be absorbed by mere memorizing. A good many facts can be memorized, of course, but there is no assurance that these facts will remain in the

mind ; and even if they did, it is a question whether in themselves they are of much value. Facts are of very little value unless they are interpreted and organized, and the results applied to the understanding of business in its larger aspects. Of what advantage, for example, is it for a student to know the value of the foreign commerce of the United States in any one year, as a fact for itself? This knowledge becomes of value only when it is related to other facts of the same kind ; as, for example, the commerce of the United States in other years, the comparison of such commerce with that of other countries, etc. ; and after such comparison is made, the question should be asked : Is the country improving or is it going back? Is its rate of progress as large as that of other leading countries, or not? After we have ascertained the fact, we should then find the reason for it, and such inquiry will lead us to discover the line along which the country has been strong, the line along which it needs improvement, and what are the factors necessary for such improvement. It will be seen, therefore, that the handling of facts requires a selection and an organization to bring out their meaning. A specific illustration of how facts should be organized will be shown below.

A second difficulty in the teaching of commercial geography is due to a lack of facility on the part of the student for obtaining first-hand information. Facts are taken from books, and no opportunity is given to the student to realize how facts are gathered. In the very nature of the case, it cannot be expected that the students will be able to gather the great mass of statistical material by their own efforts. Millions of dollars are spent every year by the United States government and by private agencies to collect statistics. Upon the data furnished by these public and private agencies the student

will, in the main, rely. At the same time every one should be taught to realize the meaning of first-hand information. Only in this way will he come to a real appreciation of the meaning of statistics, and the way in which they aid a person in the interpretation of commerce. There are sufficient opportunities for such first-hand observation in the immediate environment of the student. Consequently, every course in commercial geography should be introduced by a course in local geography.

INTRODUCTORY COURSE IN LOCAL INDUSTRIES

The purpose of such a course in local commercial geography will be threefold. First, to acquaint a student at first hand with the meaning of the fundamental concepts used — such concepts as transportation, raw material, manufactures, market; secondly, to make him acquainted with some of the methods used in gathering facts, by giving him a first-hand opportunity to gather some of the facts himself; and thirdly, to give him some background of experience, on the basis of which he can interpret the facts and figures in connection with places, countries, and activities, with which he cannot, in the nature of the case, come in direct contact.

The opportunities for first-hand study of local geography vary, of course, in different sections of the country. Persons living in rural communities have fewer opportunities to make a study of commerce than those living in the city. Furthermore, those students living in seaport cities have a still larger chance for first-hand observation. Nevertheless, no section of the country is so devoid of industry that it does not offer some opportunity for a kind of laboratory or observational study of commerce. The initial step in such a study will be the assignment of different problems to the students, to

give them an idea of the fact that industry is going on before their eyes, and to make them realize that fact. For example: A student living in a city might be asked to take a census of a particular block, and find out the kind of commercial industries that are conducted there. Another student might be asked to follow a product through the various stages in its transportation. Thus, it is possible, for example, for a student to watch the processes by which goods are brought to a store and unloaded; or how certain goods are packed for shipment, and how they are brought to the railroad station or to the wharf. Another student might have the opportunity to watch a product through its different stages of manufacture and note how the raw material is transformed into a manufactured product. These are common-place examples, of course, and they may seem to deal with facts with which every person should be acquainted. At the same time, it is surprising to find the great amount of ignorance there exists on the part of students in connection with such matters. Teachers who take a knowledge of these facts on the part of the student for granted, make a serious error, which is found reflected afterwards, when they try to teach commercial geography by means of a text-book, from which the students memorize a mass of unrelated facts and figures. Besides, the opportunity to gather facts at first hand is interesting to the student, brings him in direct touch with commercial activities, and trains him how to observe with his own eyes instead of with the eyes of the teacher or writer of the text-book.

The same reasons, then, which prompt us to begin the regular course in geography in the elementary school, with a study of the immediate locality in which the pupil lives, applies even more strongly to the study of commercial geography. The best teachers of elementary geography have recognized the

fact that the common notions can be made complete only by a first-hand observation by the pupil; and local geography alone gives an opportunity for observation within the grasp of the immature mind. A first-hand observation of a river, an island, a mountain, etc., will give the pupil at least a crude knowledge of these terms. But the preliminary course in local geography will have a larger aim than merely the visualization of facts, because the concepts of this subject are less static and more functional. A factory building or a store will in itself give the pupil no idea of industry and commerce. It is these same places as centres of activity that reveal some of the dynamic processes of industrial growth.

Facts about commerce contained in books are dead, unless they are interpreted by a mass of experience which endows these facts with vitality by showing them to be factors in a process. The foundation for such organized experience must be laid in the course in local industrial geography. Facts and laws pertaining to the entire country, or even to a section of it, do not have a concrete basis which lends itself to visualization, and from which generalizations can be drawn. A student cannot *see* the mining industry of the country, but he *can* see a particular mine, the concrete observation of which may typify the industrial laws pertaining to the mining industry in the whole country. When, later on, he studies about the mining industry, as a whole, a first-hand knowledge of the local industry serves to throw light upon phases of the study, which, otherwise, would remain abstract.

Furthermore, we have decided that the power to interpret industrial facts is the most important result of the study of commercial geography. This power is not merely of disciplinary value in strengthening the pupil's judgment, but it is of direct, practical bearing. It enables him to understand the

essential nature of business facts by referring them to the forces which produced them. This knowledge helps him to guide his course in the future by showing him how to deduce possible effects from given causes or conditions. To understand principles, he must discover them for himself by generalizing from the concrete manifestations of these principles.

These manifestations the inexperienced mind can grasp only when they are displayed within the narrow circle of his immediate environment. In the study of local industry and commerce, he will find sufficient material for induction and for illustration of principles. So important has this preliminary course in local geography appeared to some teachers that they have made it a very comprehensive course which includes the greater part of the field ordinarily covered by commercial geography. While there are strong reasons for such an elaborate course, the difficulties are that it has to be presented to minds that are not mature enough, and that most localities fail to furnish that complete illustration of the working of the principles of commerce as we find them in large industrial centres like New York. An outline of a course in local commercial geography will be found in the appendix to this chapter.

There is no lack of concrete material for the study of commercial geography. Teachers overlook the abundance of material which they might make use of, and rely upon the text-book, because it follows the line of least resistance. The text-book is an invaluable aid in commercial geography, and its proper use will be discussed a little more in detail, but after all, books, and particularly the text-book, should be used in a supplementary, and not in an exclusive way. The concrete material lies before every student, if he will only be taught how to make use of it.

In connection with the discussion of aids in commercial geography, we shall discuss the subject of the commercial museum, observation trips, and pictures.

TOPICS TO BE INCLUDED

(1) *Materials of Commerce.* — This topic deals with the materials — vegetable, animal, and mineral — which enter into commerce. An intelligent knowledge of the materials presupposes a knowledge of their source, their distribution, the extent to which they add to the wealth of man, and the way in which man transforms them so as to make them objects of greatest utility.

(2) *Physiographic Conditions which influence Commerce.* — In a certain sense, we might sum up the entire subject of commercial geography by saying that there are two elements involved, — nature and man. The study of nature in this connection involves a study of the earth as nature offers it to us (and this we note largely under the term of Materials of Commerce), and the physiographic conditions which make commerce possible. Under these we include the influence of climate, soil, wind, and natural means of transportation. This element is by no means an unimportant one. To get the greatest value from the study of the physical or physiographic conditions which influence commerce we must see how man moulds and modifies these conditions in order to make them of greatest use to himself. We may note, for example, that weather conditions have a good or a bad influence upon a crop. But if we study this element from the standpoint of man's adaptation to the weather conditions, we obtain a much better insight into the relation of man to his environment. Thus, the government issues weather reports and predictions which may foretell possible disaster. Yet,

the very knowledge of danger acts as a warning and leads us to adjust ourselves to our expected conditions. We have a season in which the earth is utterly unproductive, — the winter season. But man's anticipation of the nature of this season leads him to adjust himself to the expected condition by making due preparation in time of productiveness. The study of physical geography is both fascinating and useful when it is taken up from the point of view of man's reaction and adjustment to these conditions. While the geologist may study the physical earth with a purely scientific interest, the student of commerce should regard it entirely from the standpoint of its relation to man's activities.

The motive of the student of commerce in studying such factors as soil, climate, etc., is not the same, then, as in the scientific study of physiography. No fact is considered unless it has some bearing on the progress of commerce on the earth, and no fact is studied unless that connection is actually brought out. The proper study of physiography has the advantage of throwing light upon the manner in which the study of commercial geography can become most fruitful. The old study of physical geography consisted of an account of the *structure* of the earth's surface. The new physical geography puts the emphasis upon the forces which brought the changes upon the earth's surface. Just so, our study of commercial geography should deal with forces operating to produce changes, rather than mere dead facts. This leads us to note that there are other forces which give rise to the facts of commerce besides those of nature: the activities initiated by man himself in moulding the environment for his own purposes. We must therefore note:

(3) *The Human Factors influencing Commerce.* — These include labor, transportation, money and banking, laws,

weights and measures, and government agencies. Among these factors, the element of transportation is usually included in the ordinary school course, because it is so closely connected with geography proper, in view of the fact that the large distances which separate people from the source of production and the source of manufacture necessitate agencies for transportation. But there are a number of other elements which are not strictly geographic in nature and which are of the highest importance in facilitating the exchange of products on earth. Some of these factors, like money and banking, are generally included in the course on Economics. It may be wise to defer the consideration of other human factors to another course, which we shall call the Technique of Commerce, and which we shall treat in a separate chapter. However, the government agencies influencing commerce are of such an important nature and so generally overlooked, that we take this occasion to refer at some length to the reasons for giving extended consideration to this topic.

The facts connected with government activity in promoting commerce and industry are not generally found in the ordinary text-book, but the government reports, and condensations of these reports as found in the almanacs, are of great value in giving students an insight into the positive or business side of the government contributions to commerce. The indirect aid which the government gives to commerce is, of course, well understood. If it did not give protection to its citizens in the carrying on of their lawful pursuits, commerce would be impossible. We see how commerce is crippled when the stability of the government is threatened or when a stable government is lacking. The relation of the government to the making of laws to protect citizens at home and abroad, and establishing uniform systems of weights, measures, and

coinage, — these are all well understood. But still, the influence of these factors upon commerce should be discussed, because the appreciation of the value of this factor is heightened by such discussion, and the student will get a much better idea of the worth of his government. The direct aid of the government to commerce, however, is generally overlooked. Thus, the State Department, through the consular system in coöperation with the Department of Commerce, is a most valuable agency of the United States government in furnishing to American merchants an account of the state of commerce in foreign countries, and of the trade opportunities that are offered to merchants in various parts of the world. The Department of Agriculture is aiding, in a most direct way, the agriculture of the country by helping to increase the productiveness of the soil by the elimination of waste through the prevention of plant and animal diseases, by its protection of the nation's food supply, and in numerous other ways. It is necessary for students to know about these activities, not merely because thereby they learn more about their government, but because thereby they also learn how to avail themselves of the facilities which the government affords them. The work of the Departments of Commerce and Labor, including such bureaus as the Immigration Bureau, Bureau of Corporations, and the Bureau of Foreign and Domestic Commerce, is also of the highest importance. Here, again, the discussion of the work of the departments leads to the consideration of many large problems of vital interest to the citizen. Thus, the discussion of the Immigration Bureau naturally leads to the problem of immigration, the labor problem in the United States, and various related topics. Here we must again emphasize the fact that information as such is of little value if it does not lead to a discussion

and to a better insight as to the value of such information. If the objection is made that such information is not readily available, the answer is that if the teacher is looking for a text-book in which all these data are compiled, he will be disappointed. We shall note below how the teacher can gather data for the study of these apparently inaccessible topics, and how readily he can make them accessible.

(4) *General Geography to be Included.* — The study of commercial geography should also include, of course, a consideration of what might be called geography in the old sense, — the study of the different countries of the earth, their important industries, their large trade centres, etc. But in studying these other countries, we must make a judicious selection. Book knowledge, for its own sake, must be shunned. What principles shall we follow in selecting our topics? First, of course, we must understand the geography of the United States. But even here we can emphasize certain facts and suppress others. We are all aware how the old geography regarded it a matter of the highest importance for a pupil to know the capitals of all the different states of the Union. The standpoint of commercial geography is entirely different. Thus, taking New York State as an example: even though Albany is the capital of the state, we regard Buffalo or Rochester as more important cities. In many states the capital is a very unimportant place, and the knowledge of it is of no importance. If we were training post-office clerks, we would make it a specialty to teach them the location of as many places in the United States as possible. But as no fact is considered important that does not enter into relation with us in an industrial, commercial, or social way, we have to select our facts upon that basis. In considering the geography of the United States by sections, it may be well not to take the

state as the unit, but rather the section. Thus, for example, New England would be a unit of study, not the individual state. From the standpoint of commerce, state lines may frequently be neglected. Commercially, Jersey City and Hoboken are part of New York City, although politically they belong to another state.

Next to the study of the United States and of the state in which the student lives, the study of England, Germany, and France looms up in importance. These are the three great European countries with which our trade relations are most important. Consequently, it will be necessary for us to note the geography of these countries, but principally with reference to our trade relations with them. The detailed internal geography of these countries is not important, except to the extent to which it explains the progress of certain industries in those countries. For example, it may be important to explain certain factors which have contributed to the supremacy of England in the field of cotton manufactures. This consideration might lead us to discussion of natural conditions in England. As a general rule, however, unless the fact enters into our commercial life in some way, or unless it explains a certain phase in the mastery by man of his environment, it may be neglected. One fault that must be avoided is the learning of mere lists of exports and imports of the country. This is the merest kind of book-learning or fact-lore, that leads to nothing. We must repeat again the injunction that no facts are to be taught unless they have some significance in relation to our own activity.

The other European countries that may be included are Italy, Russia, and Austria-Hungary. The reason for such inclusion is the fact that these countries furnish a large body of immigrants, and the understanding of economic conditions

in those countries gives us a better insight into the labor problem in the United States, and helps to explain our trade relations with those countries. If the objection is made that we are leaving the student in ignorance of important countries like Sweden or Greece or Spain, the answer is that we are compelled to make a selection. It is better to have an intensive knowledge of a few facts than a superficial knowledge of a great many. The most valuable substitute we could give to the student for the large mass of facts is the ability to find the facts for himself when he needs them, — the ability to use reference books. How the student can be trained in this direction will be discussed in connection with aids in commercial geography.

For obvious reasons, our American neighbors, Canada and Mexico, must not be overlooked in our study. As for the South American countries, we may take Brazil, because of the tremendous importance of its two crops, coffee and rubber; Argentina, because of its beef; and Chili, because of its nitre and its general commercial progressiveness. Asia would be represented in our course by Japan, China, and India. Our trade relations with the Orient are of the utmost importance, not because of their present status, but because of the unbounded possibilities which the Panama Canal to a large extent will help to realize. These countries, with their very large population, are only beginning now to demand those luxuries of the western world which in our world have come to be considered necessities. Their increasing demand will lead to increased trade with the United States, their nearest neighbor. The trade opportunities for American merchants will therefore become multiplied many-fold within the next few years, and the student should therefore come to a realization of these opportunities. One of the things which a student

in commercial geography should cultivate is the imagination. This is cultivated not only by a view of the present conditions as they are pictured by the mind, but by the possible future conditions which we may expect. The man of imagination, we may say paradoxically, is the best business man, because he adjusts his activities not only to present needs, but also to the larger needs of the future.

Our trade with the West Indies, of course, will have to receive due consideration, although the particular geography of the several West India Islands and the various capitals may not be of such great importance. There are at least three staples of commerce that figure in the West India trade: tobacco, sugar, and fruit. Again we must mention that a study of these products can be best accomplished not by merely reciting their names or by telling what countries they come from, but by relating them to some agency or activity which influences them. Thus, the West India fruit trade is largely in the hands of the United Fruit Company. The study of the activity of the United Fruit Company is a much better means of organizing the subject of the fruit trade in the West Indies than a consideration of the geography of the different places from which the fruit comes. Our trade relations with the Philippines will, of course, receive due attention, because the Philippine Islands are a possession of the United States. Australia and New Zealand are not so important to us now, but they may become much more important on account of the Panama Canal. In that case, Australian products will have to receive proper attention. The continent of Africa is of the least importance, commercially. There are a few factors connected with it, that may be of value, such as the gold and diamond supply of British South Africa. But the geographic facts may be noticed as an incident to other topics

studied. Thus when the question of a coast line is considered, Africa may be used as an illustration of how an unindented coast line results in few harbors, and therefore, in little commerce. The Congo region is another illustration of a topic noted incidentally in connection with the study of the rubber supply of Brazil.

SELECTION OF MATERIAL

Illustrated by the Topic of Materials of Commerce. — We saw the difficulty of the study of commercial geography due to the large mass of facts, and we stated that it was absolutely necessary to make a selection. The principle of selection we also stated to be this: Facts selected were to have some relation to the possible industrial activity of the individual student. We found, therefore, that we would have to reject such topics as the detailed study of Africa, the study of certain countries of Europe, etc. We also found that we had to make a selection of a few of the products among all the materials of commerce. We may illustrate from materials of commerce such a selection of facts and the principles to be followed in such selection.

(a) Select those which are most important to the United States, because of their magnitude. Corn is an illustration of such a product. We must study it not only because it is by far the greatest single crop of the United States and the most valuable single product, but because the meat supply of the country depends upon this crop.

(b) Select those which are illustrative of important phases of industry. We select iron and steel on this principle, because the industry involves a number of stages of manufacturing, and it enters into the industrial activity of the United States to a greater extent, perhaps, than any other single industry.

(c) Select those which enter largely into international trade. On this principle we select cotton, because it is the greatest single export product of the United States. This product helps to create the favorable balance of trade, and thus makes the United States a creditor nation.

(d) Select those which illustrate utilization of by-products. Petroleum is a good illustration of such a material. The by-products in the refinement of crude petroleum to-day are much more valuable than the kerosene, which at one time was considered the only useful product of the refinement. The importance of the utilization of by-products lies in the fact that not only is the total wealth of the country increased in that way, but the main product is reduced in price, because of the elimination of waste. The cattle products and the packing industry may also be considered as an excellent illustration of the utilization of by-products. The familiar saying that "everything of the pig is utilized except the squeal," illustrates this fact.

(e) Select those which are indispensable to the great industries of the United States. Thus copper might also be considered, because of its great importance in the electrical industry and because the United States is the greatest producer of this product.

(f) Select the most important food product in the country. In the greater part of the civilized world it is wheat. Naturally, there is nothing more important than the food supply of a country, but in addition, wheat should be considered in relation to its effect on the railroad business of the country. The annual shipment in the fall of the harvested wheat to the Atlantic Coast is one of the greatest sources of revenue for the railroads. If the shipments of wheat are large, the business of the railroad is large, the business of the steel

mills is large, because the railroads are their greatest customers, and other industries are correspondingly benefited, owing to the increased buying capacity of the workers. Thus we see that the consideration of the relation of the wheat crop leads us to a study of the relation of the size of the crop of the country to its wealth as a whole.

(g) There is one product, gold, which should be considered for a special reason of its own. It ought to be studied because of its importance as a medium of exchange, and the relation of the gold supply to high prices. There may be a number of products which we may have omitted from the list, such as tobacco, sugar, coffee, etc., but these products time does not allow us to treat independently. We may consider them in relation to the country in which they play an important part. Thus, coffee should be treated in some detail when we come to study the geography of Brazil.

ORGANIZATION OF MATERIAL

How shall we organize the facts selected, as, for example, the materials of commerce noted above, so as to hold them in mind, so as to give them significance, and so as to relate them with the other facts in our possession in a complete system. We may state the following principles of organization :

(a) A knowledge of facts without interpretation is of little value. By interpretation, we mean the discovery of the causal relation of the facts, the explanation of the fact by showing its relation to a cause, and by tracing the effect of this fact upon other facts.

(b) Hence, pupils should not be asked to memorize facts which have no significance. This point has been stated before. The more significant the associations gathered around a fact, the more likely is it to remain in mind.

(c) How shall we organize our knowledge of figures? Commercial geography deals with statistics and many of the figures are of importance and should be remembered, but in this connection we must remember that abstract figures are of little significance. By this we imply that there is no meaning revealed to the ordinary mind by the mere fact that the total quantity of steel produced by the United States is over 26 million tons. The mind does not grasp the importance of this fact. But when we compare this quantity with that produced by Germany, — 13 million tons, — we begin to draw inferences, and note that the United States produces twice as much steel as our nearest competitor. Relative figures are therefore much more important than absolute figures, and graphic methods are the best means of organizing statistical facts by bringing out the quantitative relationship between the figures. In connection with aids in commercial geography, we shall discuss a little more fully the importance of graphs in commercial geography.

(d) Another method of organization is to follow a certain factor through its various stages, to view it through its various transformations, and trace its progress from its origin to its destination. There is nothing that adds so much to the interest of the study, there is nothing that helps so much to transform the study from a static to a dynamic one, and there is nothing that helps to focus the attention upon function rather than facts, as does this procedure. Thus, we may follow iron, starting with the mining of the ore and its transportation to the blast furnaces, considering its transformation into pig iron, its manufacture into steel bars, the rolling of these bars into rails, and the laying of these rails upon our railroad tracks. In this way, we not only attain an organized view of the value of iron as a product, but we note the human agencies which are

necessary to transform the iron so as to make it most useful to man, and we note all the organized effort which this necessitates in the way of transportation, manufacture, etc. The net result is to give us a view of iron not as a thing, but as a promoter of industry and a satisfier of needs.

(e) In all our organization of facts, we must dwell upon the importance of causal relationship. In order to show that a certain factor is a cause, we use a method which we may consider the method of hypothesis. We see a certain condition, such as the development of a great cotton industry in New England, and we are not satisfied with the mere fact of saying that there is a great industry in that section, but we inquire as to the cause of such development. In order to find an explanation for this phenomenon, we consider the general factors which promote an industry, and we assume that New England must have these conditions. We look around and find its great water power, its great supply of labor, its nearness to the market, and its early start in the industry; and we find that these factors explain the greatness of the industry. We therefore call them causes. On the other hand, we see that the cotton industry in the South is not as great as we might expect. We look at the conditions, and we find the absence of reliable labor, and this explains why, in spite of other natural conditions, the South cannot compete with New England in the manufacture of cotton. This shows us another way in which we arrive at causal relationship, — a very striking way. The writers on logic call it the Method of Difference. For example, the country is prosperous, and we should expect its prosperity to continue. All of a sudden, we find the wheels of industry are stopped. What has happened? A certain condition has been changed. A money stringency has arisen, the banks have called in their loans, and

manufacturers have consequently been compelled to close their shops. The change in prosperity is therefore attributed to the change in this condition, other factors remaining the same. The method of difference should be continually used in order to explain a given situation. What is lacking in Mexico, we ask? With all its natural resources, we see the difference between Mexico and the United States. The answer is, lack of something which the latter possesses, — stable government and education.

AIDS IN COMMERCIAL GEOGRAPHY

1. *The Text-book.* — This is the only aid with which some teachers are familiar. Of course, it has some uses. (a) As a source of reference for facts. In the assignment of lessons in the text-book, the teacher need not necessarily follow the order of topics in the book. He may, and should, assign by topics, and let the student, by use of the table of contents and the index, find the treatment of the topic assigned. (b) As a means of keeping the class together. Whatever the values of individual assignment of problems may be, it nevertheless remains a fact that there should be a common basis upon which the pupils should build their knowledge. The text-book, in a sense, represents the medium which unifies the work of the different pupils, and furnishes the organized review of the subject. (c) While the ordinary text-book method by which the teacher assigns his lessons and hears recitations is grossly inadequate, at the same time the text-book as a means of review is of great importance, and may be read with great interest by a person who has had an intelligent background of experience, which the text supplements. (d) The text-book is an aid in the organization of facts, because it gives to the student types of organization. It makes comparisons, looks

for causal relations, and finds them. (e) By means of suggestive causes and problems, it stimulates the pupil to investigation and research.

The limitation of the text-book, we have noted incidentally. (a) It cannot bring the facts up to date, because facts change and statistics are different from year to year. The pupil must therefore bring facts up to date by means of reference books. (b) The text-book gives the facts and generally gives the explanation of causes. It therefore checks self-activity. It is true that the student will have to exercise his mind in order to think over the explanations of the text-book, but, in general, he may simply take them as dead facts and memorize them. This is the main difficulty of the text-book recitation method. For that reason, the progressive teacher will use the text-book only as an aid in providing material, and make use, to a large extent, of other aids.

2. *Reference Books.* — Among the reference books are almanacs, encyclopædias, and government reports. The almanacs are mines of information on many topics, — information that is available when it is needed. The mistake that many text-book writers make is to cram their books with information, so as to make it relatively complete and take the place of the reference books in that way. The pupil therefore imagines that these facts are to be crammed. Many facts need not even be remembered, but the student should be taught how to find them whenever they are needed. One of the most important abilities that the teacher can cultivate in the pupils is the power to use reference books, because in that way he gives them the power to help themselves by finding their own information when the teacher is not there to give it to them. We see how helpless many people are in the matter of finding information on a number of simple topics, because they have

never been taught how to find the information for themselves. The student must be taught how to use a table of contents and index. He must be taught how to use a catalogue, how to consult a bibliography, how to find magazine articles on the particular subject on which he is working, how to find the information he is looking for in the almanac, the encyclopædia, or the government report. (A list of important references and government publications will be found in the appendix to this chapter.)

But in the assignment of topics to students for research, we must avoid certain mistakes. One of them is, to confine the benefits derived from the topic for research to the particular student who is undertaking it. This is a common fault of the seminar method as it is extensively used in colleges and universities. The other students should not only have a general knowledge of the topic on which the particular student has specialized, but such knowledge should be impressed by discussion in the class upon the report of the student who has made a special investigation, and by holding the other students responsible for a general knowledge of the conclusions reached by the student who has made a special investigation. Another fault which might be found in the secondary schools is that students will present discussions and reports which they themselves do not understand, because they have copied the conclusions of others as they found them. Questioning on the part of the teacher will avoid this difficulty. Another difficulty might be that students will become pedantic or desire to make a display of their diligence. This is not really a serious difficulty, and is a matter the handling of which will depend upon the tact of the teacher.

We may note some suggestions on how the ability to use reference books can be acquired. The basis for this ability

is the knowledge of how to use an index or a catalogue, and an acquaintance with popular reference books like the *World Almanac* or the *Encyclopædia*. Skill in the use of reference books can be developed only by practice, and the following are some of the ways in which opportunities for practice can be given:

(a) Lessons should be assigned by topics, instead of by pages, so as to compel the student to resort to the index.

(b) Assignments should be made which are not fully covered by the text-book, and will compel the student to go to the library in order to obtain the information in some other text-book or in reference books.

(c) Statistical facts and figures should frequently be looked up by the students themselves, and not handed to them. For this purpose a large number of convenient reference books, like the *World Almanac*, should be in the hands of the class. If possible, every student should have a copy of his own.

(d) A number of convenient statistical reference books, such as Bullinger's *Monitor Guides*, Lloyds' publications, and certain United States government bulletins should be found in the commercial library of the school, so as to facilitate research.

(e) Special lessons on the use of reference books should be given in the class, and the students given a knowledge of what the various sources of information are, and practical drill, under the direction of the teacher, on how to find a certain piece of information.

(f) Certain questions of fact, such as are frequently found in the inquiry column of a newspaper, may be proposed to different members of the class, who may be required to find the answer in the reference book. At first the possible lines of research to discover the fact may be discussed in the class,

but later on the question should be assigned without any clue to the student. To insure honest work in this connection, no two students should receive the same questions.

3. *Observation Trips.* — We found that one of the necessities in commercial geography is a proper background of first-hand information on the basis of which the student can generalize. This is to be supplied by the observation trips. Such trips to business houses and industrial plants are well known. Unfortunately, they have frequently failed of their true purpose, because they have been looked upon as mere holidays, and because the teacher has not definitely kept in mind the purpose of the trip. The following principles to be observed will suggest the way in which these trips can be made of the highest educational importance.

(a) There should be a definiteness of aim. If the pupils are going to a particular plant, the teacher should know why he has selected that plant and what he is aiming to accomplish by the particular visit. This aim should be not only in the teacher's mind, but in the pupil's as well.

(b) Most of the difficulties in the observation trips arise from the fact that the student's attention is too scattered by the novelty of the situation to enable him to observe the things which the teacher wants him to observe. This trouble can be obviated by suggestive questions given out by the teacher in advance of the trip, to be answered by the pupil's individual observation. The student will therefore be on the look-out for the facts which are necessary to enable him to solve his problem.

(c) Special problems may be given to particular students, so that while the whole class will get a view of the object of the observation trip as a whole, particular pupils will make it their business to make an intensive study of certain phases.

(d) The most important part of the observation trip, perhaps, is the discussion and the reports after the trip. This phase is frequently neglected. It is the unifying factor in the observation trip. It brings together the various observations of the pupils, it results in the exchange of ideas and the stimulation of thought, and it leads to the inquiry of causal relationship.

4. *Commercial Museums.* — The commercial museum has become a very important adjunct to the course in commercial geography. It furnishes the concrete material that is so necessary in the study of materials of commerce. Its purpose is twofold: first, to illustrate concretely the materials of commerce; secondly, to trace the product through its various stages of manufacture by showing samples of the product in the various stages of manufacture. Sometimes the commercial museum will also include a number of technical forms and instruments of commerce, such as various kinds of commercial papers, time-tables, charts, and other supplementary material necessary to explain the technique of commerce. Material for a commercial museum may be gathered with very little difficulty. Business men and manufacturers are ready to aid educational institutions by sending samples of their products. The important thing, however, is to classify such materials, and to catalogue them so as to make them available for classroom use. The mere putting away of material in cabinets for show purposes is not taking advantage of the opportunity at hand. It may be that a classification of the products in accordance with the old type of food, clothing, and shelter, is as good as any. A twofold classification of the products may also be advisable: first, a collection of raw materials of commerce, and, secondly, a separate collection of materials in their various stages of transformation.

✓ 5. *Pictures, Stereopticons, and Moving Pictures.* — Pictures are an important concrete aid where the facilities for first-hand observation are lacking. They give us a view of how other people live, of how industries are conducted which we cannot observe at home. Pictures are not properly made use of by teachers, because they rely upon the fact that the mere showing of the picture will lead the student to observe. This is certainly not true, because seeing the picture and observing its details are generally not synonymous. In order to make the picture of educational use, it should be discussed in the class, and the significant features of it pointed out to the students. In that way, each picture will furnish the equivalent of a chapter in itself. The stereopticon lecturer who explains the pictures unconsciously shows the correct educational principle by leading his students not only to see the picture, but to observe its details. The moving picture has come into modern life as a valuable educational adjunct. By presenting movement and change, it helps us to see the transformation which an object undergoes. It can therefore be made an important means of showing students processes in manufacture and industry in their development. The disadvantages of both the stereopticon and moving pictures are that the presentation has to be in the form of a lecture, that note-taking is out of the question on account of the darkness, and that questions during the lecture are impracticable. These difficulties can be obviated to a great extent by questions and discussions after the lecture. These are necessary, otherwise the exhibition will degenerate into mere entertainment without instruction.

6. *Maps.* — The map in the study of commercial geography is important, first, because of the way in which it makes possible the discussion of routes of commerce; secondly, the

way in which it emphasizes the relation between physiographic features and commerce. The teacher of commercial geography ought to have various kinds of maps.

(a) Reference Maps for the location of places under discussion. These maps cannot be used for study, because they are too complete, and contain too much detail.

(b) Mercators Maps. These are maps designed to facilitate the study of trade routes. On these maps the meridians appear as parallel lines. They are the only maps which make it possible to study intelligently the trade routes of the world. The disadvantage, that the continents appear somewhat distorted at the north, is relatively of little importance.

(c) The Globe. While theoretically all geography, in the narrow sense, should be studied from, or with the aid of, a globe, practically this is impossible. The countries are represented on too small a scale, and the difficulty of seeing the places on the globe from every part of the room renders its use impracticable. It should, however, be used supplementary to the Mercators maps and as a corrective of possible wrong impressions.

(d) Relief Maps. These are maps in which the elevations of the different countries are represented in relief. They are a useful aid in the understanding of the relation between altitude, climate, and production, and they are also a great aid in understanding the obstacles of travel and the influence of natural barriers upon commerce.

(e) In the absence of these relief maps, physical maps which omit political divisions are a good substitute.

(f) Commercial Maps. These are maps which are subdivided according to commercial and industrial areas. They serve to emphasize the fact that as far as areas of fertility are concerned, the political boundary is a mere accident.

(g) Railroad Maps. These maps should contain important railroads of the country, conspicuously marked. They are important for the study of the problems of inland transportation. Many may be obtained gratis from the railway companies.

7. *The Graph.* — There is no other method so valuable as a means of making alive the dry figures in tables of statistics. An analysis of the function of statistics will make this clear. Figures in themselves have as little meaning as facts in themselves. It is only in relation to other figures that they acquire a meaning. Without such relation they are both dry and meaningless. For this reason, the untrained mind finds itself unable to grasp the content of a column of statistics without some concrete aid. Various devices have been adopted to furnish such aid. Readers of popular newspapers are familiar with the device adopted by writers on economic subjects, to convey to the mind the magnitude of certain figures. In all cases, some relative standard is adopted. For example, the magnitude of the cotton crop of the United States is pictorially illustrated by a large bale of cotton, in comparison with the size of which the pictures of the bales representing other cotton crops appear insignificant. Similarly, the writer on the merchant marine of the United States, who wants to give a most effective argument in favor of a measure to stimulate the growth of American shipping engaged in foreign trade, draws a series of vessels, each representing the tonnage of a country. The tiny vessel which represents the tonnage of the United States in foreign commerce looks ridiculous alongside the great monsters representing England and Germany, and this form of representation gets hold of the imagination in a way which endless columns of figures and discussions will fail to do.

The first function of the graph in the study of commercial geography is to stimulate the mind to make comparisons of the relative magnitude of a certain product in different countries, or the relative magnitude of different products in the same country. It will be noticed that comparison necessitates a common factor or denominator. This is the particular product in one case, or the particular country in the other case. Thus, it would be valueless, as a general rule, to compare the magnitude of the copper tonnage in the United States with the tonnage of coal in Germany, because the common element of comparison is lacking. The graphic illustrations, such as may be found in any standard text-book on commercial geography, show how, by means of heavy lines, we can make a comparison of the magnitude of a product, such as wheat, in different countries. A scale has to be determined in advance, and the figures in the statistical table have to be reduced to that scale. Graph or cross-section paper should be used for the diagram, because it is more accurate, and because it saves time.

Relative magnitudes are sometimes represented by areas instead of lines. Thus, an entire circle represents, let us say, the wheat crop of the world, and different sectors of this circle, cut in proportion, represent the magnitude of the crop in different countries. The census office makes extensive use of the circle. In general, the use of the circle has certain disadvantages. First, because it necessitates coloring the different sectors, and secondly, because the eye finds it difficult to grasp in an instant the relative magnitude of different parts of the circle, unless the contrast is striking. Therefore, the circle does not lend itself to such accurate representation as the line diagram.

There is another graph, to which alone the term properly

belongs. It is of the highest utility in both commercial geography and history in revealing to us growth and progress. Thus, if certain lines drawn to a scale represent the population of the United States in the different decades, we may, by connecting the ends of these lines, form a curve which by its direction shows in a most striking manner the upward trend of the population of the United States. The curve is particularly important in showing fluctuations. Take a table of statistics representing the total exports and imports of the United States. Reduce the figures to a scale and draw lines representing these figures. Join the ends of these lines and you have a fluctuating curve showing that the progress of commerce is not entirely in an upward direction; that there have been fluctuations, depressions, and recoveries. Similarly, by making one curve represent the exports and another curve in another color of ink represent the imports, we can see by the closeness of the approach of the curves at different times how the balance of trade has varied in different years. We see that they never crossed, showing that the volume of exports was never exactly equal to that of the imports. The graphic representation of these facts will not only show the state of affairs, but will lead the mind to search for causes in explanation of the state of affairs. This discussion of the facts and a search for causes which it stimulates will be illustrated in the appendix of this chapter by a lesson on the analysis of a table of statistics.

It must be remembered that those graphs are most impressive to the student, which he has constructed himself. But if the time will not allow for sufficient work of this sort in the class room in commercial geography, the drawing department should be enlisted to aid in this direction. Besides, many of the graphs could be constructed at home by the students.

Practice in the interpretation of graphs cannot, however, be confined to those made by the students themselves. It is of the highest importance to give the students the ability to interpret facts and figures, and to look for the causes of facts. This ability can be stimulated and developed only by extensive analysis and discussions. For this purpose, the teacher in commercial geography will have to have at his command a number of graphic charts which can be hung up on the wall. Even without such charts, crude graphs drawn on the black-board will be of utility in the discussion.

SPECIAL METHODS OF TEACHING COMMERCIAL GEOGRAPHY

A great deal on this topic has been indicated in what has been said before. It will be convenient in this place to sum up and to supplement some of the matters treated. In what follows, only rational methods are, of course, mentioned. The old type of relying upon facts memorized from a text-book deserves no serious consideration.

(1) *Heuristic Method*. — This is the ideal method of the investigator. It is particularly of value in the study of local geography. It is a method in which the student gathers and interprets his own facts. To make this method available at all, the student must be taught how to gather facts and how to interpret them. Suggestive questions in the form of problems have to be submitted to him, and the line which he must follow in order to solve the problems indicated. These problems at first have to be of a very simple nature because the solution of the larger problems in commerce requires training, both in the gathering and sifting of facts and in their interpretation. This at once points to the limitations of the heuristic method.

It is too difficult for the amateur student, and it might

lead to two extremes, both of which have to be avoided. In one case, the student will be given a problem to solve without any hint or suggestion as to the line of attack. He will naturally give up before going very far, just like the person to whom a difficult conundrum is submitted. The teacher will be compelled to give the solution himself, and thus defeat the very purpose of the heuristic method. The other extreme is to give too many hints to the student and to solve the problem for him practically in advance. The good teacher will choose the golden mean between these two extremes.

The heuristic method as a method of first-hand observation for the gathering of certain facts is indispensable in local geography. The student must see at first hand the phenomena of commerce and industry, and secure a foundation of experience on the basis of which he can build up the fundamental concepts of commerce. Observation visits to industrial plants and the first-hand gathering of simple statistical information are both steps in the application of the heuristic method.

(2) *The Inductive Method*.—The heuristic method is, of course, a method of induction, too, because it proceeds from the particular fact to the general law. The term “inductive method,” as used here, implies a modification of the heuristic method, so as to eliminate some of its difficulties. The implication here is that the teacher presents the facts to the student, instead of compelling him to gather them for himself (as in the heuristic method), and helps the student to draw generalizations from these facts. It is much more rapid than the strict heuristic method, and is available in the study of the remote environment of the pupil, such as localities and industries not immediately accessible. It presents more definite tasks to the student, and gives him all the necessary

training in the establishment of causal relationship. Nevertheless, it cannot entirely supplant the pure heuristic method, because the information which it presents to the student is derived more or less at second hand.

The steps in the process of generalization are clearly indicated by the so-called formal steps in teaching. The analysis of a table of statistics for the purpose of drawing conclusions, or generalizations, is a good illustration of the application of the inductive method.

(3) *The Type Method.* — This is a form of the inductive method which has useful application, especially in those schools in which the time allowed for the course is limited. In such courses, the teacher, instead of attempting superficially to cover the whole ground, chooses a portion of the field for intensive study. Instead of attempting to study all the different industries of a country, he chooses one or two industries as typical of all the others, and as throwing sufficient light upon the processes necessarily involved in most industries. Thus, in the study of the agricultural industry, the teacher selects one particular crop and follows it through all its stages from sowing to harvesting, marketing, and consuming. This study becomes typical of all the other agricultural crops, and gives the student an organized view of one of the ways in which man extracts wealth from the earth. The study of the product through its various transformations gives rise to a series of generalizations, which are of use to the student in interpreting other phenomena of commerce.

(4) *Deductive Method.* — In the study of the formal steps of teaching, we find that all induction must terminate in deduction, or application. Superficial persons confound the term deductive method with a method of memorizing rules and facts from a text-book. This is not what is meant by the

true deductive method. It is a method which begins with a cause or a situation, and proceeds to trace the effect or to apply the law to other situations. Where a knowledge of the fundamental concepts in commercial geography has been taught, there is a sufficient basis of rational knowledge of causes and laws, which may be applied to the deduction and interpretation of facts. The deductive method thus proceeds from cause to effect.

With a knowledge derived from induction — that an indented coast means good harbors — it proceeds to study a coast such as that of Africa, and to draw conclusions from the fact that the coast line is smooth. These conclusions it proceeds to verify by means of facts. If those conclusions are not correct, there must be other conditions which operate. For example, we know that a certain region has very little rainfall, and we conclude from that fact that its agriculture is in a very poor state. Instead, we find that it raises great fruit crops. In explanation of this inconsistency, we find that irrigation has broken down the obstacles to agriculture placed by nature. The advantages of the use of the deductive method are:

(1) In showing us changes as they progress, — causes as they are at work in producing effects. The inductive method, after all, while working in the reverse direction, is compelled to retrace its steps, and become deductive in the end.

(2) It teaches us how to anticipate effects from certain conditions. The ability to foretell or prophesy, so to speak, is a very important one in business. How can we anticipate the possible success of a particular venture? By being able to trace the consequences which certain conditions will naturally give rise to.

The use of the deductive method implies a broad basis of experience, and cannot, therefore, be used at the beginning of

the work ; but in the more advanced topics it should be used continually. For example, instead of beginning with the products of the country and explaining why the particular products are successful in that country, we ought to proceed to a large extent by considering the natural conditions which exist in the country, including the human factors, and trace how these conditions have coöperated in creating the state of affairs as it exists.

OUTLINE LESSONS

I. Cotton (Two Lessons)

Motivation : Uses :

- (1) Importance to man.
- (2) Wealth which it adds to the United States.
- (3) Number of persons the industry employs.

Production of cotton : Agricultural phases :

(1) Growth of cotton : conditions, geographical distribution, kinds of cotton. (Review of matter studied in biologic course — Samples of raw cotton to be shown. Map showing geographical distribution of product.)

(2) Statistics of cotton production : analysis by means of graphs ; growth of cotton production, historically, and causes of this growth ; relation of slavery to cotton production (correlation with history).

(3) Ginning of cotton : The cotton gin and its work (illustrated by pictures) ; importance of Whitney's invention ; the seed and its uses.

Marketing of cotton :

- (1) Methods of packing ; importance of packing ; (correlation with physics).
- (2) The cotton factor or commission merchant.
- (3) The cotton exchange (untechnical treatment).

Transportation to market:

(1) Shipment to ports; comparative importance of the different cotton export ports.

(2) Cotton shipments abroad (note dependence of England upon American cotton and effect of Civil War upon English industry); effect of foreign shipments on balance of trade (brief and untechnical treatment).

Manufacture of cotton:

(1) Conditions favorable to cotton manufacture. (Note general principles favorable to any industry, such as (a) Abundance of raw material, (b) Power, (c) Abundance of labor and skilled supervision, (d) Good transportation facilities, (e) Large market, and show the application of these principles to cotton manufactures in New England and the South.)

(2) Steps in cotton manufacture. (Shown by pictures and specimens.)

(3) Statistics of cotton production, — treatment with aid of graphs (analyze figures, and explain superiority of New England over the South).

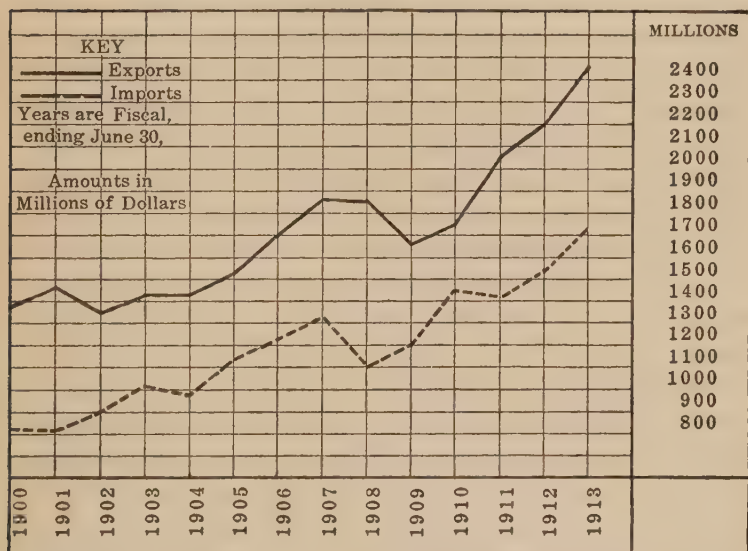
Future of cotton manufacture in America: The influence of the Panama Canal in helping American manufactures, particularly in the Oriental trade; importance of the Oriental trade; probable effect of the European war upon the future of American cotton manufactures in enlarging their markets.

Note. The dividing line between the two lessons is drawn on this basis:

The production, marketing, and transportation of raw cotton constitute one unit; the manufacture of cotton and the economic factors connected with the struggle for the world markets constitute another.

OUTLINE LESSON ON ANALYSIS AND INTERPRETATION OF STATISTICS WITH THE AID OF GRAPHS

Progress of Foreign Commerce of the United States 1900-1913



Purpose of Lesson. — 1. To enable students to grasp as a whole the growth and fluctuation of the volume of commerce. 2. To see the relation between exports and imports, and note changes in balance of trade. 3. To interpret the movement and give causes for the fluctuations at different times. 4. To apply ability to interpret statistics to similar statistical graphs in general, and to the course of foreign commerce of the countries in particular.

Introduction. — (It is presumed that students have been taught to convert a statistical table into a graph.) Students, as a part of home work, may bring in graphical chart above.

In later lessons this will not be necessary. It also can be dispensed with at this stage; but the teacher should have a large graphic chart ready for class discussion.

Presentation. — Export Curve. What year marks the high-water mark of export trade? The low-water mark? Is the movement of the graph continually upward? In what period is there fluctuation? (1900-1903, 1908-1910.) Where is it horizontal? (1903-1904, 1907-1908.) What does this denote? (No change.) In what period is the upward movement pronounced? (1905-1907, 1910-1913.) In what period is there a downward movement? (1901-1902, 1908-1909.)

Import Curve. — Similar questions. Other questions to develop the fact that steep upward grade indicates rapid progress; steep downward grade, rapid decline; slight grade, slow change.

Relation between export and import curve. Do the two curves intersect at any point? When do they come closest together? (1903 and 1910.) When are they farthest apart? (1908, 1911, 1913.)

Generalization. — Generalized observations. 1. Imports of the United States are smaller than the exports. Balance of trade is always in our favor. Why? 2. The volume of exports and imports is not a continually increasing quantity. There are periods of fluctuation.

Interpretation. — Why was there such a sharp upward movement in 1905-1907? Because it was a "trade boom" period. Why was there a check to it in 1907-1908? Because of the effects of the panic of 1907. Why was there such a drop in 1908-1909? Because the full effects of the panic on the business world did not show themselves until 1908-1909. What is the significance of the export curve from 1910 to date? A recovery from trade depression.

Why was there such a drop in imports 1907-1908? Because we retrenched on luxuries and cut down on the importation of these. (Note that the export movement 1907-1908 is relatively stationary instead of downward, because we are trying to find a market abroad for our unsold goods, thus keeping up the volume of exports.) Why is the balance of exports over imports so great in 1908? Because we have been trying to find a market for our goods, and cut down on our imports of luxuries. Why is the balance so small in 1910? Recovery from trade depression has taken place, we have made up for our retrenchment in luxuries in previous years, and we do not need to look for an expansion of our foreign trade, because of the satisfactory domestic market.

Application. — Teacher will have ready charts of other countries like Great Britain, France, and Germany. Pupils will note, for brief comparison, relation of import and export curve in these countries and develop reasons for excess of imports over exports in Great Britain. Comparison made between the state of trade in these countries during our periods of depression and the state of trade in the United States.

SYLLABUS IN LOCAL INDUSTRIES OF NEW YORK CITY¹

Part I

Local Occupations: (1) of the neighborhood as ascertained by the student; (2) of New York City from the Federal census; (3) Classification of these industries. (A) Extractive industries of New York City: (1) Function; (2) Location; (3) Advantages. (B) Manufacturing and mechanical

¹ Course offered by the New York High School of Commerce since 1904, which can be adapted to the study of any other industrial community.

pursuits of the City of New York: (1) Function; (2) Needs of the manufacturer, — (a) Raw material, (b) Supply of labor, (c) Supply of capital, (d) Supply of power, (e) Access to the market; (3) Influence of each in locating local manufactures; (4). Other causes determining the location of local manufacturers; (5) Comparison of local manufactures with those of the country, state, and nation according to, — (a) Capital, (b) Laborers, (c) Wages, (d) Value of product. (C) Transportation industries of New York City: (1) Function; (2) Kinds; (3) Character of traffic. (D) Trading industries of New York City: (1) Function; (2) Kinds, — (a) Wholesale and retail, (b) Specialty store and department store, (3) Tendency to eliminate wholesaler and jobber. (E) Service industries of New York City: (1) Professional service; (2) Personal service; (3) Domestic service. (F) Banking and funding facilities of New York City: (1) Function; (2) Kinds, — (a) Banks, commercial, savings, (b) Trust companies, (c) Building loan associations, (d) Insurance companies, life, fire, marine, accident, etc.; (3) Exchange facilities.

Part II

New York State. (A) Advantages of its situation: (1) Importance of New York Harbor; (2) Superiority of New York Harbor: Hudson River, Mohawk Valley entrance to the interior; (3) Importance of Hudson-Champlain route to the North; (4) Significance of Long Island Sound. (B) The chief extractive industries: (1) Farming and Dairying; (2) Fruit growing; (3) Market gardening; (4) Oil and natural gas; (5) Lumbering; (6) Mining. (C) The chief manufactures of the state: (1) Clothing, women's; (2) Clothing, men's; (3) Textiles; (4) Foundry and machine-shop products; (5) Furs; (6) Newspapers and periodicals; (7) Liquors,

malt; (8) Tobacco, cigars, and cigarettes; (9) Slaughtering, meat packing; (10) Printing and publishing, book and job; (11) Localization of certain manufactures in particular cities. (*D*) The transportation facilities of the state: (1) Water routes, — (*a*) Erie Canal and its connections, (*b*) Barge Canal, (*c*) Hudson River, (*d*) Lake Champlain and Canal; (2) Rail routes, — (*a*) New York Central Lines, (*b*) Erie, (*c*) Lehigh Valley, (*d*) Lackawanna, (*e*) Delaware & Hudson; (3) Pipe lines. (*E*) Banking facilities and financial supremacy. (*F*) Commercial future of the state: (1) Development of water power; (2) Changes in kinds of agriculture; (3) Development of the Adirondacks as sources of power, lumber, iron, and recreation.

SUMMARY

Commercial geography includes a study of the way in which man, by his industry, has subordinated the forces of nature to his use.

The difficulties in teaching are due to making information, rather than organization and interpretation, the end of the study; and to a lack of facility for obtaining first-hand information. The second difficulty may be met by beginning the study with the geography of the locality.

The topics to be included in commercial geography are: (1) the materials of commerce; (2) physiographic conditions which influence commerce; (3) the human factors in commerce; (4) the geography of the United States, of the state in which the student lives, of our American neighbors, and of the great commercial countries of the world.

The general principle of selection of material is that the facts selected are to have some relation to the possible industrial activity of the student. Specific principles are stated

in the text. The facts selected must be organized, so that the student will be able to hold them in mind, to give them significance, and to relate them with the other facts in his possession, in a complete system.

Aids in commercial geography are the text-book, reference books, observation trips, the commercial museum, pictures, stereopticons and moving pictures, maps, and graphic charts.

Special methods of teaching commercial geography are the heuristic method, the inductive method, the type method, and the deductive method. The use of the deductive method implies a broad basis of experience. It cannot therefore be used at the beginning of the work; but in the more advanced topics it should be used continually.

EXERCISES

GROUP ONE

1. Show wherein commercial geography and industrial geography differ from general and physical geography. Discuss fully.
2. Discuss the difficulties in teaching commercial geography. How may these obstacles be overcome?
3. What is meant by the interpretation of industrial facts? How may this power be acquired in the high school?
4. State the principles which should guide the teacher in his selection of the materials of commerce for class-room use. Illustrate.
5. How should the text-book in commercial geography be used?
6. What aids should the teacher employ in order to make his teaching of geography vital?
7. Define the heuristic method, and explain its application to commercial geography.
8. What is meant by a "type" lesson? Discuss its value in the teaching of geography.
9. Show the value of the deductive method in commercial geography.
10. Give three graphic devices employed in commercial geography, pointing out their uses and limitations.

GROUP TWO

1. Outline a lesson on "Localization of Industries in the United States," illustrating from prominent industries. Give in detail one section of your lesson.
2. Suggest a system of classification of products for a commercial museum.
3. Give the sequence of steps in teaching pupils how to use reference books, showing progressively the reference books you would introduce.

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CHAPTER IX

TECHNIQUE OF COMMERCE

PURPOSE

THE purpose of the course in the technique of commerce is :

(1) To relieve the course in Commercial Geography from a part of its content, so as not only to improve the teaching of what remains by making it more intensive, but also to organize the content so taken out, on a more scientific basis. It has been customary to make commercial geography the dumping-ground for all kinds of topics, so that it has become the all-inclusive subject. Unfortunately, it is impossible to cover so much ground without giving the most superficial attention to the topics involved.

(2) To make an intensive study of the functions of commerce, by giving the student a comprehensive view of the human agencies, which, through the organization of the functions of commerce, have made its growth possible.

(3) To give the background of experience for an intelligent study of the principles of economics. The average student of eighteen or nineteen, such as we would find in the last year of the secondary course, is capable of studying the philosophy of business, such as is found in the principles of economics, if he has sufficient illustrative material to make the economic laws concrete. According to this view, then, the course is one in applied economics. It will be unnecessary to defend a procedure by which the applications of the principles of eco-

nomics are treated before the abstract principles themselves. This method is only another illustration of the inductive method. The same reason exists for such a concrete course as for a course in inductive or applied geometry, as a preparation for the study of deductive or Euclidean geometry.

The objection that it will be hard to observe the boundaries of the subject of the technique of commerce, and that it will constantly trespass upon the field of commercial geography, need not give us any serious concern. There is no objection to the study of commercial arithmetic because it reviews a number of topics taken up in the elementary school arithmetic; nor is it an objection to the study of accounting to say that a number of topics in bookkeeping are repeated, and that therefore the boundaries between bookkeeping and accounting are not observed. The point of view in both subjects is a little different, and the review of bookkeeping in accounting is from a more scientific standpoint. This analogy does not completely explain the relation between commercial geography and the technique of commerce, but simply points out the fact that the point of view of the two is different. In commercial geography, the centre of organization is, to a large extent, the country or the locality, while the industry is subordinated with reference to that. In the technique of commerce, the centre of organization is the industry, while the geographic element is made subordinate with reference to this. Each subject, therefore, reënforces the other by viewing the facts studied in the other subject from another point of view. This does not imply that the field of commercial geography is identical with that of the technique of commerce. In the latter, the organized functions of commerce are discussed in a very comprehensive way. In the former, they are treated incidentally.

DIFFICULTIES OF THE SUBJECT

The difficulties which we found in the study of commercial geography exist perhaps to a larger extent in this subject.

(1) The difficulty connected with the selection and organization of facts is not so very great, because the field is more limited than that of commercial geography. Furthermore, an industry, as a unit of study, lends itself to better organization than a country or a material of commerce. But even in this study, in order to avoid overwhelming the study with details, it is necessary to choose typical industries and typical processes as illustrations of general business laws and functions.

(2) The difficulty due to absence of facilities for first-hand observation can be met by the use of pictures, concrete material, and the use of the limited facilities for first-hand observation that may exist in the community. Of course, facilities for observing organized business do not exist to the same extent in all parts of the country, but since organization is largely a matter of schemes and documents that can be exhibited on paper, the facilities for a concrete study of organization should be available to all. The commercial museum should have, as a part of its collection, documents, business papers, reports, etc., as an aid to the study of organization.

(3) The greatest difficulty is due to the absence of an available text-book. No matter what the abuses of the text-book are, it nevertheless serves to unify the work of the student. The difficulty is not insurmountable, in view of the advanced character of the students to whom this course is open. There are two ways open for the teacher. One is for him to write a text-book in outline, and to present mimeographed copies of the outlines to the student as the course progresses, and the other, to assign different topics for in-

vestigation to different students, and to discuss the reports brought in by these students in the class. This method is what practically may be called the heuristic or seminar method, as applied to this subject. The disadvantage of such a method in this case lies in the fact that there is danger that each student will pursue his investigation without regard to what the other students are doing, and without making himself acquainted with the work of the other students. This difficulty is met, as we indicated in connection with commercial geography, by holding every student responsible for a general knowledge of the results of his neighbor's work. It may be well to have a mimeographed outline prepared by the student beforehand or as a result of his report, and to distribute it to the other students for reference and for purposes of review. In many instances the same topic may be presented to the class as a whole, particularly where opportunities exist for observation trips, and a discussion of the result of this trip should lead to generalizations upon the facts which operate in the world of industry.

It must be remarked here that discussion upon the reports or the observations, and systematic questions along the lines of a report, is the only method by which the teacher can make sure that the pupil is actively observing the facts, and participating in their organization. The method of suggestive questions in the way of problems furnishes the right incentive for the students' active observation. The question suggests the problems which the organizer meets with and how he solves them. The inductive method, from fact to explanation, or from effect to cause, has, therefore, extensive application. Similarly, the method of proceeding from cause to effect plays an important part. A form of organization being given, we observe how this organization proves its worth in the exercise

of the functions of commerce and in the accomplishment of efficient results.

The sources for the study of the technique of commerce have been made available in a compact way by the publication of several excellent books, each of which deals with a special phase of the subjects. While there are too many of the books to use them all as general texts for the class, two or three of the most important books might be used as such texts with excellent result. But the substance of all of them can be made available, to a large degree, by the assignment of different portions of the books for reports and for reference, according to the method indicated in the preceding paragraph. The planning of a course in the technique of commerce is not very difficult, if we keep in mind the analogy of the divisions of the ordinary text-books on economics into production, exchange, distribution, and consumption. A syllabus of the course will be suggested by the headings that follow and by the discussion of the reasons for including certain topics.

(1) Manufacturing. The classification of industries belongs largely to the subject of commercial geography. The technical processes involved in manufacturing are considered in other fields, such as physics and chemistry. The topics connected with manufacturing which are to be included in our course here are such as are connected with the organization of the manufacturing plant, shop management, employment of labor, the technical forms necessary to keep track of costs, the relation of the different parts of the plant, and general problems of overseeing work.

(2) Preparation for market. Too little attention has been paid in the past to the various methods in which the finished articles are prepared for shipment. The question of packing is a very important one. It is said America loses a good deal

of its South American trade in competition with Germany, because it overlooks the details which have to be observed in insuring the safe arrival of the articles to their destination. Here it must be observed that it is not the aim of this part of the course to teach the intricacies of the method of packing. Work of this sort would be of a specialized character, and would require a laboratory or, at least, a museum. But the main purpose of this work is to teach the student that an important problem exists in business, — a problem that must be met, and that cannot be ignored without inviting disaster.

(3) Transportation. This is probably the most comprehensive topic in the course on the technique of commerce. It includes an account of problems of transportation by rail and by water. While the course in commercial geography considers routes by land and water, it does not take up in any detail the organization of such transportation and its relation to the shipper; or the relation of the government to the railroads. This course treats of such topics as the conditions which determine the establishment of railway rates, the documents connected with shipping and railway transportation, and the conditions under which articles are transported, — all of which have to be considered, together with many incidental topics.

(4) Marketing a product. In this subject, we have to consider the relation of the manufacturer to the jobber, the place of the middleman, the wholesaler and the retailer, and the commission man. Certain recent phenomena in connection with marketing should be considered, such as the development of the mail-order house, the growth of corporations, and the tendency for the elimination of the middleman. The trust as a phenomenon of modern business organization, can be treated best in connection with the course in economics.

Methods of reaching the consumer, such as advertising, should also be considered under the head of marketing. This topic should be made concrete by an analysis of typical modern advertisements, for the purpose of arriving inductively at the principles of advertising.

The work in advertising and salesmanship is considered so important that several schools have already introduced courses in these subjects in the last year of the secondary school course. While we do not in any way underrate the value of a knowledge of advertising and salesmanship, we believe that in ordinary circumstances a special course in this subject is not productive of the best results. The phases of advertising that are connected with English and drawing are easily handled. The psychology and the technique of salesmanship may be easily taught in theory, but in practical illustrations the results will be largely barren. Just as soon as the schools have established coöperative relations with business houses, such as are discussed in the last chapter of this work, the introduction of a special course in advertising and salesmanship will become a very valuable feature.

It is true that the defenders of such a course, under present conditions, assert that it is possible for the student to practise on the rest of the class by playing the part of salesman, and trying to induce his fellow-students to buy. But it is evident that the conditions are far from analogous to those in real business, because the mock customers have no real money to give up; and while they may be convinced by the arguments of their fellow-pupil, it is a question whether they would be similarly convinced if their money were at stake. We do not imply that there is no value in a theoretical course in advertising and salesmanship without practice work. As a matter of fact, we advocate including a brief treatment of these

problems in the course in the technique of commerce. But our aim of work in this connection is not to make salesmen out of pupils, but to give them a realization of the problems that exist, and, if possible, to determine their vocational bent in a specialized direction.

In evening high school and university extension work, courses of salesmanship are very valuable, because they serve the needs of students who are already engaged in practice, because they give them new ideas which they can test, and because they give them principles of action which they can apply in real business. We consider that a special course in advertising and salesmanship is of that highly specialized character that we think out of place in a high school which offers no practice work. But we repeat, that with the opportunities for practice work which the coöperation with the business community would furnish to students of the last year, such a special course would be very effective.

(5) Exchange. This includes the very difficult subject of money and credit. It includes a study of the functions of money, the question of high price, the functions of banks and other agencies of credit, the work of the credit man, the mechanism of the stock exchange and the clearing house, and foreign exchange. The subject is of such difficulty that it should be postponed until some progress has been made in the study of the principles of economics, of which it is properly a division.

ECONOMIC ACTIVITIES OF THE GOVERNMENT

As a supplement to the course in the technique of commerce, there ought to be a study of the economic functions of the nation, state, and municipal government. Possibly this course ought to be made a part of the course in civics.

It would be preferable, however, to put this work in charge of the department of economics, because it deals almost exclusively with economic functions, with which the teacher of history may not be so familiar. Where the departments of history and economics are the same, the task will, of course, devolve upon the teacher of history.

As a matter of civic duty, it is incumbent upon every citizen to know how the money raised by the community is spent. It is a part of civic culture for a student to learn something about the economic phases of the water supply, of street paving, lighting, transportation, and something about municipal accounting. The topic of the duties of citizens is, of course, treated in the elementary school, but the broader view of the activities of the community, particularly as they affect the citizen from an economic point of view, is a subject that must be reserved for the more mature mind. In the New York High School of Commerce a very comprehensive course in municipal activities is offered to first-year students. While they profit considerably by it, the advantage of the course would be much more striking if it were postponed to a later period. The syllabus of the course in that school will be found appended to this chapter. The matter of municipal finance as well as public finance will have to be treated after the student has some familiarity with the principles of economics. The same rule, by the way, applies to the discussion of corporation finance. Logically, the subject of raising money should precede the discussion of the way in which it is spent. But the consideration of the way in which public moneys are spent lends itself to much easier treatment than the other topic.

The relation of the state to business does not lend itself very conveniently to independent treatment, because the

state contributes indirectly to the promotion of industry and commerce by means of its laws and regulations. Consequently, such phases of public regulation as the administration of our canals and the regulation of our public utilities might be treated with better advantage in connection with the subject of transportation. The dependence of commerce upon the existence of a wise system of regulation should be emphasized as frequently as possible, especially to impress the learner with a higher conception of the meaning of government and his relation to it. The functions of the United States government in connection with commerce are so much connected with geographic questions that perhaps the subject might be left to commercial geography. In connection with transportation, we have to study in detail the relation of the government to the regulation of the railroads. Questions of public finance, such as ways and means of raising funds, the regulation of the currency and government finance, may be profitably studied in connection with economics.

Aids and Methods. — As the aids and methods in the technique of commerce are practically the same as those in commercial geography, it will be unnecessary to repeat them here. The reader will find them discussed in Chapter VIII.

SYLLABUS IN MUNICIPAL ACTIVITIES ¹

Part I

Origin of government in coöperation for public purposes; growth of government to meet increased needs arising from the growth of population: (A) the town, the smallest unit of self-government; (B) the county, a group of towns; (C) the

¹ Based upon the course of study offered by the New York High School of Commerce since 1906, and easily adaptable to the needs of any community.

village, due to the growth of a part of a town; (*D*) the city, a village grown large.

Part II

New York City: (*A*) Causes for consolidation; (*B*) Greater New York Charter; (*C*) Outline of New York City Government. (I) How New York City gets its money: (*a*) From taxation; (*b*) From other sources (the general fund); (*c*) From loans. (II) The Board of Estimate and Apportionment: (*a*) Estimates income from (*Ia*) and (*Ib*); (*b*) Apportions the income among the departments; (*c*) Approves bonds; (*d*) Makes provision for the payment of corporate stock through the sinking fund, which is in charge of the Sinking Fund Commissioners; the interest is an increasing annual charge to be met out of the current income. (III) How New York City gets its employees, — the Civil Service Commission under the administrative control of the State Civil Service Commission.

Part III

The street, the central element of city life. Its capacity for transportation controls the growth of the city. How the city acquires land for street and other public purposes. The street plan: (*A*) City plans; (*B*) Defects of the 1807 plan; (*C*) Improvements proposed in Manhattan possible through excess condemnation; (*D*) How these defects are avoided in new sections. Street pavements: (*A*) Construction; (*B*) Maintenance and repair. Transportation on the streets: (*A*) Vehicular and foot traffic; (*B*) Surface and elevated. Franchises: (*A*) What they are; (*B*) How they are granted; (*C*) What restrictions should be imposed upon grantees. Transportation under the streets: (*A*) At present municipal ownership and private operation of the

subways with state regulation through a local board — the Public Service Commission of the First District; (B) Should we have municipal operations? (C) Proposed extensions of the present system. Street cleaning and refuse collection. Refuse. Disposal. Sewerage system and sewage disposal: (A) Sewerage for the protection of the public health; (B) For protection of the harbor. Street lighting; light and power distribution through the streets. Water supply: (A) The Croton reservoirs and aqueducts; (B) New Catskill reservoirs and aqueducts; (C) Supply for Brooklyn and Queens; (D) Supply for Richmond. Water distribution: (A) Water waste and metering as a remedy; (B) High pressure system; (C) Water rents. Street trades and miscellaneous uses of the street: (A) Licensing problems; (B) Incumbrances; (C) Permits for signs, stands, bay windows, awnings, etc. Docks, improved street terminals. Bridges, extended streets. Ferries, bridge substitutes. Fire: (A) Protection from fire; (B) Prevention of fire. Health: (A) Positive work of the Health Department; (B) Preventive work of the Health Department. Tenement-house Department: (A) Regulation of buildings other than tenements; (B) Care and maintenance of public buildings. Education. Parks and museums. The Department of Charities, and Bellevue and Allied Hospitals. Police: (A) protection of the public; (B) Prevention of crimes; (C) Detection of crimes. The local courts and the Department of Correction. Taxation and the Department of Taxes and Assessments.

Part IV

Review of the city activities through a more careful study of the budget and per capita costs.

Part V

The part of the citizen in local government: (A) National and municipal parties; (B) Party organization and management.

SUMMARY

The purpose of this course is to organize a part of the content of commercial geography on a more scientific basis, to make an intensive study of the functions of commerce, and to give the background of experience for an intelligent study of the principles of economics.

In order to avoid the difficulty due to a mass of details, typical industries and processes should be selected. Other difficulties to be met are the limited facilities for first-hand observation, and the absence of available text-books. The lack of text-books compels the use of a topical method of individual research and reports.

The syllabus in the technique of commerce follows the analogy of the divisions of economics. (1) Manufacturing includes the organization of industry; (2) preparation for market includes the subject of packing; (3) transportation includes the technique of physical distribution by land and sea; (4) marketing a product includes the study of modern buying and selling organization, including the subjects of merchandising, advertising, and salesmanship; (5) exchange includes the subjects of money and credit, banking, and stock, cotton, and produce exchanges.

The course in the technique of commerce should be supplemented by a study of the economic functions of the government and by a study of public and corporation finance.

The methods to be used in teaching this subject are similar to those discussed under commercial geography.

EXERCISES

GROUP ONE

1. Bound the field of the technique of commerce so as to distinguish it from commercial geography.
2. For teaching purposes, how would you divide the subject-matter included in this chapter?
3. Justify the inclusion of courses in advertising and salesmanship as part of the high school course.
4. Why is it important to teach the economic activities of the government?
5. What use should be made of the principal government publications?
6. How would you introduce the subject of technique of commerce to a high school class?

GROUP TWO

1. Modify the syllabus in municipal activities so as to adapt it to the needs of your own community. Justify each change.
2. Outline a lesson on the organization of the United States Steel Corporation, which could be used in an advanced class.
3. Prepare a set of instructions to be furnished the teachers of technique of commerce for the purpose of preserving unity of work in classroom instruction and of minimizing the tendency to be diffuse.

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CHAPTER X

HISTORY OF COMMERCE

PURPOSE OF THE COURSE

THIS course properly belongs to the department of history. It is not wise to expect the commercial teacher to give instruction in this subject. The reasons are: first, his lack of equipment in the way of a broad knowledge of the subject; and secondly, his lack of training in methods of teaching history. Nevertheless, in connection with several of the commercial subjects, such as accounting, commercial geography, and law, the historical element should occasionally be brought forward by the commercial teacher in order to throw light upon the way in which a particular subject has grown to be what it is. One of the greatest achievements of the nineteenth century has been the application of the historical method to the study of the social and economic sciences and to the study of biology. In the latter, we call the historical method the method of evolution.

This statement gives us a clue to the purpose of the history of commerce; that is, the study of the development of the important phases of modern industrial life from the standpoint of how they came to assume the form that they have to-day. The application of the historical method to economics has revolutionized that study; the application of the historical method to the study of law tends to make judges who are much more responsive to the interpretation of legal principles in line with modern industrial conditions.

Since the history of modern industries is the result of complex circumstances, it is idle to expect to study it independently of the history of institutions and culture. It is for this reason that the regular department of history should take up the study of economic history in connection with the larger background of general history. If this is done, the phenomena of commerce will appear related to the other historical phenomena, and not in an unintelligent isolation.

The purpose of this chapter is principally to aid the history teacher in the appreciation of those topics which are needed to give an appreciation to the student of the growth of modern industrialism. So important is the economic element in our history, that certain theorists have maintained that all history must be explained on the basis of economic growth. These theorists, while one-sided, represent a healthy protest against the old view, which regarded history as a mere study of kings and their fortunes, wars and the succession of dynasties; and even against the less narrow view of history as past politics. Where a special course in industrial history is offered, constant reference should be made by the teacher to the general period in which the particular industrial event occurred. Knowledge of general history should, therefore, be presupposed and the connection of the economic events with political and social history should be emphasized by means of parallel charts of events.

The selection and organization of facts in economic history furnishes problems similar to those to be found in commercial geography, and what was said about methods of selection and organization there applies to a large extent here. If we bear in mind the true purpose of history, — the understanding of our present institutions, in the light of our growth, — we shall have a sure guide which will help us in emphasizing

certain facts and eliminating others and a guide for the organization of facts in causal series. These considerations will show us:

1. That facts which are merely of antiquarian importance, or which only satisfy curiosity, might, in large part, be omitted;

2. That those facts should loom in importance which explain institutions as they exist to-day; and

3. That certain facts which may not be directly connected with present conditions might, nevertheless, be studied, because they serve as lessons to guide us in our present life. An example of a fact of this sort is the failure of John Law's scheme in the early eighteenth century. The danger and the disastrous consequences of over-speculation are strikingly illustrated there. But history repeats itself, and several times the same results have shown themselves, because people are either ignorant of the lessons of the past or are hopeful that history will contradict itself for their benefit. The preceding discussion will show us what commercial topics may, with great advantage, be emphasized by the history teacher.

SELECTION OF TOPICS

In ancient history, there is practically nothing of consequence, excepting perhaps the exploits of the Phœnicians, which have a mere historic interest. But the mediæval history of commerce is of extreme importance, because the foundations for modern commerce were laid in the Middle Ages. In this period, political, social, and economic history must be closely correlated; otherwise, the period is entirely unintelligible. Here comes the folly of trying to teach the history of commerce to a class which is ignorant of general history, and apart from general history. An effective aid to

organization is to take the mediæval history of a particular country, like England, as a type, and to consider the other countries in relation to England, and in those important aspects which the history of England does not illustrate.

The development of the town is the core of the industrial history of the mediæval ages. But since the town was a political creation and its development was dependent upon political and religious aspects, it is necessary to refer to those topics in order to throw light upon the growth of the town. Hence, the development of the feudal system and the effect of the Crusades are widely connected with the growth of the town. The discussion of mediæval markets and fairs is also to be taken in conjunction with social and political conditions, and similarly, the study of the merchant and industrial guilds. The teacher of political history who discusses the Magna Charta is apt to look upon the document as merely political in character. If he reads it closely, he will see the influence and the recognition of the merchant and artisan class in that document, and the influence of industrial conditions upon the development of constitutional history. This power, by the way, is strikingly illustrated by the conditions which led to the adoption of our own Constitution.

There are several topics which the study of industrial history of England does not throw sufficient light on. Some of these are: the development of trade routes, and systematic trade relations through the Italian city republics and through the Hanseatic League. In the discussion of these two topics we have aspects applicable to modern industrial conditions, which may be gathered; as, for example, development of a consular system, the origin of the bill of exchange, and the development of a code of international law.

The study of mediæval commerce must stimulate the im-

agination of the pupil so as not to lead him to make the mistake of interpreting conditions of those days by analogy with present conditions. On the other hand, we must miss no opportunity, where there are analogies, to point them out. The student should not forget that a system of international trade and industrialism, as we know it to-day, was unknown in the Middle Ages, and yet we should not lose sight of the roots of present conditions, which originated in those days.

In what is commonly known as the beginning of modern history, one period receives something like adequate treatment in the ordinary history, and that is, the period of discovery, exploration, and settlement. But the mistake frequently made by the student of general history is to look upon the enterprises as individual exploits and as mere stories of adventure. The student in the secondary school should have outgrown the narrative or biographical stage of history and have come to regard the study in the light of economic and other motives of men, and the consequences to which these led.

Other topics which should receive due attention in the early period of modern times are the economic influence of the Reformation, the development and strengthening of the spirit of nationality, and the influence of a strong central government upon commerce. The development of English industries and commerce is a striking phenomenon which should receive separate attention, particularly because the history of England before 1776 is the history of our own country, and because this history strikingly illustrates the principles of industrial growth and the obstacles to it as revealed by the mistakes which the continental countries made and by which England profited.

The mercantile system, the development of banking, the

corporations and trading companies, and the work that was accomplished both in America and Asia close the history of the early modern period and bring us to the threshold of modern industrialism as we find it to-day.

The epoch-making event or series of events which ushered in this period is called the industrial revolution. It is a striking commentary upon the way history is generally written, that an event fully as important as the French Revolution, with which it was contemporary, receives practically no attention in the general history text-book. This is because of the fact that it lacks the spectacular elements of the other events, and that its changes are not immediately apparent, although, ultimately, much more permanent than the effects of the French Revolution. It is an event which marks the changes from the domestic system of manufacture to the modern industrial system, and it should be traced in all its consequences both in England and in the United States.

With the end of the eighteenth century, England ceases to be the centre of organization for modern history, as far as American students are concerned, and the industrial history of the United States takes its place. But in connection with the effects of the industrial revolutions, England is still the ideal type of organization, because the effects of the industrial revolution and the attempt to meet those effects, by factory and labor legislation, followed through the nineteenth century and down to the present day.

The chief topics in connection with the industrial history of the United States would be exemplified by the way in which the new country was conquered by the pioneers, by the influence of immigration, and by the utilization of our natural resources. The industrial history of the United States, through the national period and up to the present day,

may be ideally correlated with commercial geography, because of the fact that this country gives us illustrations of primitive conditions which are more or less recent, and which the European countries do not give us so readily. The development of this country beautifully illustrates the conditions under which man, in his struggle with nature, masters it for his own purposes and for the betterment of mankind.

Recapitulation of point of view governing in the history of commerce: (1) Those topics are selected which show the gradual conquest of the earth by man. (2) One country is made the centre of organization. (3) The development of commercial phenomena is treated to some extent independently of national limits, especially in the topical reviews. Thus, the growth of the mercantile system cannot be viewed and properly understood in connection with one country alone. In this topic, the mercantile system, not the country, is the type of organization. (4) Correlation with economic geography should constantly be kept in view.

METHODS OF STUDY

(1) The Text-book Method. A good text-book should be the basis of the work. The teacher should have such works as Gibbins's or Cheney's "Industrial History of England" and Coman's "History of the United States" as supplementary text-books to the general works in the course. Since topics, as in commercial geography, need not be assigned by pages, the use of several books is no disadvantage, especially as the student has been taught how to use his text-book as a reference book. The text-book recitation method alone is apt to make the study dry and uninteresting, and may give the student an inadequate idea of the meaning and source of his-

torical facts. It must therefore be supplemented by other works. The use of a large number of books gives rise to what may be called the topical method.

(2) Topical Method. In this method students are assigned different portions of a topic to work up, and do not use the same text-book from which to work up the topic. The advantage is that all the contributions of the student bear upon the main topic and omit unessential details, and students get a fulness of information impossible to obtain from a single text-book. The disadvantage is that the lack of a text-book is apt, in a secondary school, to deprive the work of its unity, and to divide responsibility in failing to establish as its minimum requirement the knowledge of a text on the part of every member of the class.

(3) Source Method. The advocates of this method believe that history ought to be studied from first-hand sources: accounts of eye-witnesses, journals, letters, inscriptions, etc. They believe that only in this way will students get the right idea of how history is made, and the opportunity to draw their inferences as to the significance of events instead of having to accept the conclusions of others. The objection to the use of this method in the secondary schools is that the proper historical perspective cannot be obtained from the accounts of contemporaries. Furthermore, it takes a highly trained mind to draw inferences from historical facts. The teacher is doing enough if he leads the pupil to grasp the inferences of great historians and shows him how to verify these conclusions by reëxamining the facts for himself. The use of sources is therefore supplementary to the main work and not primary. "The aim of historical study is not so much training in the art of historical investigation (a training which the source method gives) as in thinking historically.

The importance of sources lies in the fact that they teach the pupil that he is dealing with living characters."

Sources are valuable as an adjunct to the regular work, because they make the study more concrete by making the characters of the past, for example, speak and act like living persons, and because they, therefore, give a vivid picture of the life and state of society in the past. But the source or "seminar" method, as such, is inapplicable to the secondary school as far as history is concerned, although its analogue, the laboratory method, is of high utility in commercial geography.

(4) Combined Method. The teacher uses all the good features of the preceding methods. (a) He uses a single text-book, because it gives unity to the work and centres responsibility. (b) He groups the events in topics, and assigns work in other books supplementary to the ground covered in the text-book. This work consists either in summaries of chapters from other books, or in larger reports combining the substance of several books on the topic. (c) He uses the source method in assigning topics which are supplementary to the text-book and which require the student to examine sources.

(5) Other Suggestions on Method. (a) The formal steps of teaching are not of very great assistance in connection with history, because history is not primarily a scientific subject, — one in which it is intended to derive certain generalizations. It is true that one of the purposes of studying the subject is to develop the historical judgment by giving the student the ability to judge men and events in the past, and to transfer the results of these judgments to the judging of men and events of the present. On the other hand, it must be borne in mind that the greater part of the effort of the teacher should be devoted to give the student a view of a

period, as a whole, in all its activities. The first appeal is, therefore, to the imagination, — an appeal that is aided considerably by pictures, documents, and other concrete material.

To look upon history, therefore, as a subject which is principally designed to furnish us with generalizations and applications, and to follow the sequence of the so-called formal steps of teaching, is to distort the historical perspective and to lead to hasty and valueless generalizations. The causal series is, of course, of the highest importance. We want to see the facts in their causal sequence and not merely in their time sequence, but the facts of history can best be understood by tracing them as consequences of causes rather than discovering the causes from the effects.

A rational deductive method is of the highest utility in history. To illustrate: In tracing the development of New England as a manufacturing centre, we might take the condition of New England as it is to-day and work backwards in order to trace the causes of such growth. A procedure like this would be appropriate enough in commercial geography, but in history it would be doing violence to the chronological order. The proper method would be to show certain conditions as they existed in New England at the beginning of the nineteenth century, and trace how inevitably these conditions led to certain consequences. This is the method of going from cause to effect. The formal steps, on the other hand, lead from effect to cause.

(b) One of the most serious defects in teaching history consists in giving the pupils words or concepts which they do not understand. A most striking illustration of this sort is the use of the term "charter" in connection with the early American colonies. The term "charter government" is flung at the pupils without any clearing up of its historical

significance. One reason for this in the elementary schools is that we do not bring in sufficiently the industrial background of political history. The student of industrial history should see that America was settled by the enterprise of trading companies which expected to make a profitable venture. He sees that these companies received privileges from the king, and these privileges were embodied in a charter which practically became the law under which the colony was governed. The analogy with the franchise of a public service corporation or the charter of an incorporated society, in which the privileges of the corporation are not only defined but restricted, should be made use of to throw light upon the historical concepts as we find them. Nothing will help so much in the understanding of the historical forces at work as the calling up of a living picture of the period. Hence the great importance of aids in historical teaching to accomplish this end.

AIDS IN HISTORICAL TEACHING

(a) Maps and charts. In using maps the teacher must be careful to use maps of the period in illustrating historical events, and not maps of to-day. It interferes with the workings of the historical imagination to illustrate the American colonial period by using a map of the United States of to-day.

(b) Visiting of landmarks. Very limited use of this can be made here.

(c) Pictures of men and places.

(d) Use of graphic methods, such as statistical charts and curves, to illustrate such facts as the growth of the population of the United States, etc. They give a concrete image of the development and the relation of events, which can readily be grasped by the mind which is repelled by dry lists of facts and figures.

(e) Note-books. In these the student jots down the oral account supplementary to the text-book, which the teacher gives to the class, as well as an abstract of the reports of other students on topics assigned them outside the book.

(f) School library.

SUMMARY

The history of commerce can be studied effectively only with the background of general history. Hence, its teaching does not belong to the province of the commercial teacher, but to that of the teacher of general history.

The selection and organization of facts in the history of commerce is determined (1) by the necessity of explaining the historical development of the phenomena of commerce of to-day; (2) by the value of studying the lessons of success and failure of experiments of the past, as a guide to present conduct.

In mediæval history we find the roots of many of our commercial institutions. The history of England may be made the centre of organization for the study of the mediæval history of commerce and of modern history up to the nineteenth century; and especially in connection with the causes and results of the industrial revolution, which is one of the most important topics in the history of commerce. In the nineteenth century the United States may be made the basis of organization.

The methods of studying history are (1) the text-book method; (2) the topical method; (3) the source method; and (4) the combined method. The formal steps of teaching have only a limited application to the study of history. In teaching history, concepts are frequently given which are

abstract and empty. Important aids in making the study concrete are maps, landmarks, pictures of men and places, use of graphic methods, note-books, and supplementary books in the school library.

EXERCISES

GROUP ONE

1. Under what conditions would you teach the history of commerce as a special subject? Which department should take charge of it, — the department of commerce or of history? Why?

2. Give an illustration of some concept in the history of commerce (like the guilds or the town), and show how you would make it concrete to the student.

3. Give the relative uses of the text-book method, the topical method, and the source method in the teaching of industrial history.

4. Discuss the value of maps and charts in history, treating of the following points: (a) their uses; (b) methods of utilizing them to the best advantage; (c) their limitations.

5. Show, by reference to the origin and rise of corporations, how you would correlate the history of commerce with law.

6. Outline a lesson on the development of banking. How would you correlate this topic with the principles of banking discussed in economics or in the technique of commerce?

GROUP TWO

1. Illustrate the going from cause to effect and from effect to cause in history, and show when each form of movement is used.

2. Choosing as your topic the manufactures of New England, give a lesson designed to bring out the influence of geography upon history.

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CHAPTER XI

COMMERCIAL LAW

DIFFICULTIES AND FAULTS OF TEACHING

THIS subject suffers almost as much from faulty teaching as commercial geography. One of the serious obstacles to improvement in this direction is the fact that very little has been written on the subject of the teaching of law, particularly from the standpoint of the secondary school. On the other hand, there are a number of works on method in geography, and the text-books themselves throw a great deal of light on methodology in the subject. While there are several satisfactory text-books in commercial law available for secondary schools, they do not, as a rule, throw sufficient light upon the adaptation of the principles of teaching to instruction in law.

The defects in the teaching of law in secondary schools are due to the following causes: (1) Lack of appreciation by the teacher of the true purpose of the subject. Those who frame the curriculum, too, are vaguely aware of the fact that training for business requires some knowledge of law. But a purpose, in order to be helpful in guiding the teacher in his work, should be more definitely formulated, and this will be done below. (2) A lack of scholarship on the part of the teacher. The latter can hardly be held to a serious responsibility for this lack, because he is generally a layman in the subject, and having many different branches to handle, it is very difficult for him to give expert attention to this subject

unless he has some definite guidance. On the other hand, it is generally difficult for a school to find a teacher who has had a law school training. Where such a teacher is available, of course, this difficulty falls away; but even in the case of a layman, the difficulty due to lack of scholarship is not insuperable, and it will be shown how the teacher who has had no legal training can perfect himself, at least to the extent of obtaining the proper breadth of view and understanding of the sources of the law, from which he can add to his imperfect store of knowledge when occasion requires. (3) A violation of the important principles of teaching, due either to ignorance of pedagogy or to inability of the teacher to apply the principles of teaching to commercial law, because of his failure to grasp the true purpose of the study, or to understand the various parts of the subject in their organic relation.

The notion that any one who understands the subject is properly equipped to teach it has long ago been exploded. The lawyer, therefore, may have an excellent grasp of his subject, but it does not follow that he will necessarily make a good teacher of commercial law, because of his ignorance of methods of teaching it. And thus, we find many great scholars in a subject who are utter failures when they attempt to teach their subject; a fact which has led a cynic to remark, that a person's ability to teach is in inverse proportion to his scholarship. Of course, we subscribe to no such heresy. While it is true that the good secondary school teacher, who is excellent in his methods of presentation and drill, will, nevertheless, fail as a teacher of commercial law, if he lacks breadth of view, scholarship, and proper perspective, we nevertheless hold that with only the fractional scholarship in law which the lawyer possesses he will make a very much

better teacher than the latter, because he will keep on the level of his pupils' attainments, he will arouse their self-activity, and he will give them the necessary amount of intelligent drill.

The knowledge of the principles of teaching is, therefore, of great importance, and without it all the scholarship in the world will not avail. On the other hand, there are special problems connected with the teaching of commercial law and special methods which grow out of an appreciation of the true purpose of the subject. Consequently, the commercial teacher, even though he has been trained in pedagogy, must understand the true purpose of the subject and the special problems in method which arise in the attempt to realize this. We must therefore pass in review the purpose which underlies the teaching of the subject in the commercial school.

VALUE OF THE STUDY

Utilitarian Value. — We noted in Chapter I the general purpose of the study of commercial law as an element in business education, and we found that men in business, in their dealings with each other, constantly come into difficulties in which they must safeguard their rights. This they can only do properly if they know the law. Of course, it may be suggested here that a business man who is his own lawyer has a fool for a client, but it is not the intention that he should study law in order to be able to conduct his own litigation. It is imperative, however, that he should know how to intrench himself in all his contracts and other legal relations so as to protect himself against unwarranted attack and to provide himself with the arms to enforce his rights, if they should be challenged. A good deal of unnecessary litigation would be avoided if every person, at the time he entered into

his contracts or business engagements, safeguarded his rights in the proper way. While it is true that for his more important contracts he will consult his lawyer, there are numerous occasions in which he does not have the lawyer at his beck and call, in which he must act quickly, and in which, therefore, his knowledge of law will be of the greatest help.

As a general rule, in spite of carping critics to the contrary, the standard of commercial integrity is high, and business men carry out promises which they could avoid through legal technicalities or flaws. If this were not the case, the courts would be flooded with litigation. On the other hand, faith in the integrity of the person he is dealing with has led many a business man to great losses, which could have been avoided if he had known the law. The mere knowledge by an unscrupulous opponent of the legal strength of a person's position leads him to refrain from attack or from avoiding his obligations. To sum up, then, we may say, almost paradoxically, that a man in business should have a knowledge of law, not in order to practise it, but in order to know how to avoid litigation.

In a more narrow utilitarian sense, the study of law is of very great importance to the student who contemplates specializing in the profession of public accountancy. Problems which the accountant has to solve are intimately connected with legal questions. While it is true that in most important matters the lawyer will be consulted, the accountant who is properly trained in the fundamental principles of law will detect legal points, the consideration of which is of highest importance to the business; — points the existence of which neither the lawyer nor the principal would have been aware of, without the assistance of the specialized knowledge of the accountant. No wonder, then, that com-

mercial law is one of the required subjects of the examination for the degree of certified public accountant.

It may be objected that the place for this study should be the university and not the secondary school, because it is not the function of the latter to prepare for the practice of the accountant's profession. While it is true that it is not the function of the secondary school to give specialized preparation in a particular line of business activity, it should, nevertheless, lay a broad foundation in law, on the basis of which the university student who specializes afterwards in a particular phase of the subject can pursue his narrower field with the proper perspective. Again, a number of subjects studied in the secondary schools, such as accounting, will be repeated in the university. But this repetition will be, not a case of travelling over the same ground, but a spiral repetition. The point of view will be broader, and the work at the same time will be more intensive. A good foundation laid in the secondary school will be of immense help in the more advanced study of the same subject in the higher school of commerce.

Culture Value. — We have spoken of the utilitarian value of the study of law. There is another view, the broad cultural one, which deserves consideration. Every educator realizes the importance, in education for citizenship, of a knowledge of our institutions to those who are going to participate in maintaining them. The course in civics partially supplies this need by training the future citizen to comprehend the sources and development of our institutions, and his relation to them. Every well-arranged course in civics devotes considerable attention to what may be called public or constitutional law, including the work of our legislatures and of our executives and the duties of citizenship. But the work of

our courts is given very little attention in the ordinary course, beyond a statement of the kinds of courts and their jurisdiction. The great body of private law which regulates the legal relations of individuals in society to each other is entirely neglected. The work of the courts which have been instrumental in establishing this great body of law, the study of the problems they have met, and how they have attempted to work them out, the meaning of precedent, the value of establishing a general rule which will also work out substantial justice, — these are all problems which, in great part, are neglected by the student of civics.

The good course in commercial law, in supplying this need, contributes in great part to the culture of the citizen by giving him a better knowledge of the meaning of our institutions, and of his duties to the state and to other individuals. Furthermore, a knowledge of the workings of our courts is indispensable in connection with intelligent opinion and action on such subjects as the recall of judges and judicial decisions. How can a person unacquainted with the basis of our law and the function of our judges and the bases of their decisions vote intelligently upon any proposition involving our judicial system? The study of law gives us not only a better view of the growth of our institutions, but it also gives us a better understanding of many of the established forms of commercial life. No student can understand such subjects as the evolution of corporations or the development of the use of negotiable instruments, without an understanding of the growth of the law on these subjects. The study of commercial law will, therefore, throw interesting light upon the growth of commercial institutions and instrumentalities. Just as history throws light upon law, so, conversely, the study of law will throw light upon industrial history.

Disciplinary Value. — Another aim which is going to influence the teacher is the disciplinary one. Irrespective of whether the powers gained from the study of law are transferable to other subjects, it is nevertheless true that the aim of the teacher to give the student power to reason about law, rather than information about it, will influence, and, in fact, direct the instructor's course in the presentation of the subject. It is peculiarly true of law, that the uninitiated look upon it as a subject crammed with facts that must be memorized in great part by the student, and they look with awe upon the many formidable tomes in which the law is found, and which they surmise the person who would be learned in the law must absorb. One who knows what the study of law means realizes what a misconception underlies this view. A lawyer's knowledge of the law is one of fundamental principles, and it involves not merely familiarity with the principles, but ability to recognize the principle as it appears in numerous concrete situations or cases. The ability to apply the principle, the ability to sift and digest decisions, to recognize differences between apparently similar situations, and similarities in apparently different cases, and to reconcile apparent contradictions, — all this is a matter of training of judgment and reasoning, and not a mere matter of knowledge of abstract rules. It is therefore evident that the aim of the teacher should be the development of power to reason about law, of the ability to apply the law to various situations, and of the power to find the law on any subject whenever one needs it. The ability to conduct research is very essential to a lawyer, because his argument is, to such a large extent, based upon authority. This ability may be of minor importance to the secondary school student, but it has an interesting phase, which will be discussed later, in connection

with the advisability of research work, by the student of our course.

This view of the aim of the teacher, which directs him to look to the development of power in the student, rather than to imparting information, is emphasized, because it has an influence upon methods of teaching and upon selection of material to be taught. Following are some of the aspects to which this view leads:

(1) The teaching of law is not principally designed to furnish a mass of information to the student. This is because the information is too vast and unorganized and because there is too much of it that is apparently conflicting or inconsistent. The legally trained mind should be able to reconcile apparently conflicting decisions when these are not in direct opposition, to understand the fundamental reasons back of the decisions, to appreciate the reasons which have led the courts to deviate from the former decisions, and to comprehend the distinguishing elements in cases which to the lay mind are apparently similar. This ability requires training in judgment and reasoning, both of which are exercised by practice. An opportunity for such practice is given by the teacher when he asks the student to decide a certain case, to give the reasons for a given legal decision, and to say whether he agrees with the decision or not.

(2) A second direction in which this view influences the teacher is in the handling of principles upon which there is no unanimity in the various states. As our text-books are not intended to have their use restricted to a particular state, they attempt to do justice to all sides, by mentioning that the law in some states is thus and so, while in other states it is different. Now, as a piece of information judged from the point of utility, this is valueless. If we live in New York

State, we want to know what the law in New York is, and (again if we keep the utilitarian side in mind) what the law in other states is does not concern us. This so-called practical point of view was formerly taken by the New York Board of Law Examiners, who marked an answer incorrect, no matter how sound its reasoning, or how much in accord with the common law, unless it was in harmony with the law in the state. In line with this policy, the same board gave partial credit for answers which were correct, but which contained no reasons. Under the direction of the court the Board has recently reversed its attitude and now gives credit principally for the soundness of reasoning of the answer. This should be the attitude of every teacher who is marking examination papers,—to give no credit for guess answers and to rate the papers principally on the ability to reason which they display.

We may sum up the reason for mentioning conflicting decisions on any subject, even if a decision in the state in which the student lives is clear and definite. It is the same as the reason which prompts the case books to give dissenting opinions of judges. The discussion of conflicting views gives the student a better insight of the reasons which prompted the decision; it gives him the power of judgment to weigh in the balance opposing opinions; it trains him to think about law, rather than to remember mere decisions or statutes, by discouraging guesswork and putting a premium on reasoning.

In the preceding paragraphs we noted that the development of power to think law, rather than the knowledge of legal facts, should determine our aim in teaching commercial law. What will be the result of teaching the subject with such an aim in view? Obviously, there will be a gain of power

to analyze legal situations, to apply principles to states of fact, to understand the reason for certain rules of law, and to deduce consequences from these rules. We may add that the necessity of apprehending a given case requires the student to put himself mentally into the situation which gave rise to the dispute. Otherwise, his judgment will be abstract and mechanical. In his constant efforts to reproduce the various conditions which give rise to litigation, and to get a sympathetic apprehension of the facts, a student will cultivate his imagination.

Some may say that the development of judgment and imagination will be of use only in connection with legal facts, and that those powers as gained from the study of law will not be capable of transfer to other subjects. In reply it may be said that law cases deal with concrete phases of life; that the problems of law are such as one might meet in everyday affairs; and that therefore the trained lawyer has more power and aptitude to apply his ability to situations outside of his profession than the trained professional man in any other vocation. It is for this reason that we find lawyers occupying most of the administrative positions in public life and even in the commercial and financial world. Those who belittle the disciplinary value of a study have particularly in mind the student of mathematics who, in spite of his great power to reason in his specialty, may show no aptitude whatever in other affairs of life. This is due partly to the abstract nature of mathematical facts and to the failure of teachers to show the applicability of these facts to concrete experience. On the other hand, the defender of mathematics, especially of geometry, points to the valuable training the student derives in learning how to deduce the logical consequences of a given hypothesis. In this respect, however,

law is not at a disadvantage. The student is constantly required to trace the results growing out of a given situation (hypothesis); he notes how changes in the facts give rise to different decisions, and he thus gets valuable training in deductive reasoning. In other words, the training in judgment and reasoning derived from the study of law is more valuable than the similar training in reasoning derived from deductive geometry. While it is true that the chain of reasoning in law is not so rigorous as in mathematics, this defect is made up by the concrete content which it possesses, and which therefore helps to make the power derived from it applicable to other fields of study.

Correlation Value. — The study of commercial law is also valuable if properly pursued, on account of the light it throws on other subjects. In the history of commerce we trace the development of commercial institutions and instrumentalities of commerce. Most of the phases of law are the outgrowth of conditions which had to be met in defining and safeguarding the rights of persons in their dealings with others. Any study of law which leaves out of sight the historical or development element misses an important possibility for culture and loses a phase without which the principles are only partially understood. This is particularly true of the law of merchants and the Statute of Frauds. The development of law is necessarily a reflex of historical conditions, and thus history and law reënforce each other.

In connection with arithmetic, we find similar correlation elements. The student of arithmetic who reads about legal rate of interest, United States rule (in partial payments), days of grace, interest on accounts overdue, etc., has only a vague notion of what these terms mean. The good teacher of arithmetic, of course, explains these matters to the class.

But as the study precedes that of law in the course, the understanding of these notions is only vague. Not until the student takes up commercial law is there an opportunity for a complete exposition of these topics in arithmetic. And it is the duty of the teacher of law to add a familiar touch by referring to those topics in arithmetic which the study of law helps to clear up. Similarly, commercial law, dealing as it does with business, naturally gives to the students interesting side-lights upon many forms of business practice, — forms that are good and forms and procedure that should be avoided in order to keep from litigation.

With regard to correlation of law and accounting, we must refer in part to what was said about the utility of law to the accountant. The corporation accountant, in particular, must constantly refer to legal decisions on the subjects. Many of the forms which the accountant and auditor uses are determined by law. The teacher of commercial law should, therefore, as much as possible, show how legal principles affect accounting forms and practice.

THE SECONDARY SCHOOL COURSE IN COMMERCIAL LAW

Topics to be Included. — The question of selection of topics for purposes of the secondary school course is a very vital one; first, because the field of commercial law is very large, and its boundaries not definite; secondly, because the time available for the subject is limited, and if superficiality is to be avoided and effective work invited, the teacher will have to confine his instruction to essential topics. In view of the embarrassment of riches which the subject offers, the problem will become, to a large extent, one of exclusion. This policy we shall have to follow on the principle that it is better to teach a few topics effectively than a large num-

ber superficially. The danger of superficial treatment arises from the fact that the appeal in that case will be in large part to the mechanical memory, and rational consideration and discussion will be almost impossible.

When we look at the content of the ordinary text-book for secondary schools, and find how much ground it attempts to cover and how many topics it attempts to crowd in, we can draw this conclusion, *à priori*, that the teacher is invited to cram all these facts into the minds of his pupils, with little regard to reasoning, discussion, drill, and consequent assimilation. No matter how good the teacher is, and no matter how well intentioned he may be, the necessity of covering a good deal of ground prevents him from giving due attention to methods which will stimulate the pupil's mind and develop in him an abiding interest in the subject. Even the professional law school is compelled to limit the ground to be covered because of the many ramifications of the subject, and it is satisfied to give the students the leading principles of the important subjects together with practice in their applications. To make up for this necessary limitation, outside of providing post-graduate work for those who intend to specialize in some branch, it shows the student how to handle a problem in law, and how to trace its solution back to the authorities.

How, then, shall we limit the field so as to omit nothing essential and so as to cover the ground in an effective manner within the allotted time? Let us take it for granted that certain essential preliminary topics have been covered. What these are, we shall find later in the discussion of the first lessons. We must then determine what topics belonging to the field of substantive law are essential in a business course, and to do so, we must decide upon the principles

which will guide us in our choice. First, of course, we must choose the branch upon which all other branches lean, and of which most of them are only special ramifications. This is the law of contracts. Secondly, we must choose that special application of contracts which is of the highest importance in the mercantile world, and which in fact constitutes its essence, — contracts for the sale of personal property. Thirdly, the extensive use of credit in modern business necessitates the study of the law of credit instruments. Hence, we must include the law of commercial paper. These, then, are the three essential topics in commercial law which the consideration of utility alone, not to mention other reasons, would determine us in including: contracts, sales of personal property, negotiable instruments.

It may be asked why the subject of real property is not included in our topics of the first line of importance. The reason is, first, that the subject as a whole is very technical; secondly, real estate transactions are a special kind of mercantile transaction, and are not comparable, as far as widespread application in business is concerned, to sales of personal property. It is only fair to require that one who wishes to specialize in real estate law because he expects it to be within the field of his vocational endeavor should take a special course in the subject.

One phase of real estate law, however, — the law of landlord and tenant, — does belong to the essential part of our course. We may put it among our subjects in the second line of importance. Another phase of it, too, is necessarily connected with the subject of contracts and sales, and that is the distinction between real and personal property. The study of the Statute of Frauds as a branch of the law of contracts will bring in, for purposes of illustration, the question

of what is real property. The subject of fixtures is connected with this question, as are other subtopics which belong to the borderland between real and personal property.

In our subjects of the second line of importance we shall include agency, partnership, bailment and common carrier, and landlord and tenant. It requires little discussion to justify the inclusion of agency in our course. The complexities of business make it impossible for the executive to attend to many of the details of the business personally, and necessitate a delegation of his authority. This leads to many problems that are unique, in the sense that their solution is not a special application of the law of contracts. Thus, the whole subject of "undisclosed principal" is of great practical importance in business, and deserves the special consideration it receives in the topic of "agency." "Partnership" is very closely related to agency, and, besides, is of obvious importance. It is therefore also included.

It may be surprising that "corporations," a subject so closely related to partnership, is not included even in the subjects of the second line of importance. The fact is that the law of corporations has so many technical aspects dependent upon statute law in the different states that it is hardly suited to satisfactory treatment in the secondary school course. There are several practical phases connected with corporations that are of the utmost importance. This is particularly true in connection with the course on technique of commerce, in which the subject of the corporation, as a form of business organization, receives special attention. Historically, too, the corporation, in the seventeenth and eighteenth century, was responsible for the settlement and the industrial development of many parts of the world. And in the nineteenth and twentieth century the corporation has

been instrumental in carrying out the greatest industrial enterprises of modern times. With its tremendous resources and its potentialities for goods, there have been serious abuses of power. The discussion of the corporation will therefore be amply covered in the history of commerce, economics, and technique of commerce; and many legal aspects of corporations may be profitably considered in correlation with the other work. Moreover, corporation accounting raises a number of important questions regarding the status of various kinds of stock, the rights and liabilities of stockholders and directors, etc., and these topics should be handled as they arise. To consider them apart from their applications to accounting, or finance, is to make them abstract, uninteresting, and unprofitable.

“Common carriers,” in view of the importance of the railroad to the business man, deserves special treatment. It may be more closely connected with economics and civics by including in it the problem of government regulation. “Bailments” is so closely connected with “common carriers” — in fact the latter presupposes the former — that it should also be included.

In topics of the third line of importance we shall include insurance, guaranty and surety, and possibly a brief treatment of corporations.

One who looks over the list of topics recommended, and compares it with the topics in the ordinary text-book, may wonder how we have limited the field of study, as we said we would do, in view of the fact that we have included practically every topic considered in the ordinary book. In reply we may say that the division of topics in accordance with primary, secondary, and tertiary importance implies emphasis upon thoroughness in the subjects of contracts, sales,

and commercial paper; a selection of the leading principles of agency, partnership, landlord and tenant, bailments and carriers, and a thorough discussion of these; and a brief general treatment of corporations, insurance, guaranty and surety, particularly with reference to their aspects of correlation with business practice. Our most important topics will therefore be thoroughly discussed, with many illustrative cases and legal problems; our topics in the second line of importance will be handled the same way, but their number will be limited; while the topics of the third line of importance will receive a still briefer and less technical treatment.

Preliminary Topics. — In our survey of the essential topics which made up the substance of commercial law we mentioned the law of contracts as the foundation upon which most of the other topics are based. This might suggest that we ought to begin our course with the study of the principles which underlie contracts. Logically this would be the correct procedure, but pedagogically it would not. It would be giving the impression to the student that the principles of law are ready made, and it would not only fail to point out that law is a matter of growth, which keeps pace with the requirements of our economic life, but it would neglect to show the student the machinery by which law is made. Some accounts of the purpose of law, the distinctions between public and private law, and some statements of the courts which enforce it ought to be given to the class: phases of the subject included in a course on elementary law.

This phase of the subject is presented in all text-books in commercial law, but unfortunately the attempt to crowd too much matter in a few pages makes the chapter dealing with this topic dry and unattractive. There is nothing more calculated to deaden interest in a subject than a large number

of definitions at the outset of the study. The introductory lesson in the subject should be more interesting and more alive than any other lesson, because it so often determines the right attitude of the mind of the learner.

The teacher must therefore lead up to the subject of commercial law, its meaning, and its problems, by a series of illustrations which show the way in which disputes and claims arise. Instead of beginning with a definition of law, let him begin with practical illustrations of duties of the individual to the state, as determined by public law, and duties of individuals to each other, as determined by private law. Now there are certain duties which individuals voluntarily assume, but which nevertheless become legal obligations that they cannot disregard without a penalty. These obligations are known as contracts. When we speak of freedom of contract, we mean that a person is perfectly free to enter into any legal contract he pleases, but once he has made his choice, he is no longer free, but must abide by the consequences of his choice. Questions of law arise when parties disagree as to the extent of their mutual obligations, and then one of the parties applies to the arbitrator — the court — to decide the difference in his favor, setting before the court his side of the case, and supporting his allegations by evidence of facts.

No better view of the need of law can be given to students than by beginning with the formation of an actual contract in everyday business, and tracing the conditions which might arise that would lead to dispute. The important point to be borne in mind in the presentation is the fact that the need for law, and the divisions of the law, should be developed from actual facts, and not presented in an abstract form.

The preceding paragraphs imply that a certain amount of procedure should be included. But how much of it? Is it

necessary for the student to learn the steps in the prosecution of the case from the service of the summons to judgment and levy of execution? Certainly not, and most decidedly not at the beginning of the course. It has been pointed out that the study of commercial law is not intended to enable a business man to try his own case. Nevertheless, one phase of procedure a student must know, for historical and cultural reasons, and that is how a legal principle is established. This necessitates a certain mention of our appellate tribunals.

It should be pointed out, by means of concrete examples, how a dispute in connection with a certain contract, which involves a certain state of facts, is presented to the courts for decision and how an appeal to the higher court is taken by the defeated party. In this appeal the latter challenges the correctness of the interpretation of the law by the lower court, and the decision of the higher court lays down a *precedent*, which succeeding judges are practically bound to follow, and which they modify only when circumstances and conditions in industrial life have so changed as to make the old precedent inapplicable. This body of precedent, it should be pointed out, constitutes the common law. The students should be shown how it is important to have uniform rules which the judge is bound to respect rather than leave every case to his discretion. The advantage of the common law in giving us rules which are both uniform and elastic may be shown, and the transition to statute law made by concrete examples. Thus, a certain decision of the courts may lay down a rule that seems unwise to the people. In that case, they have the power within limits, through their legislative bodies, to change the rule. The abrogation of the fellow-servant rule in negligence cases — a rule that entered in campaigns for the recall of judicial decisions — is an illustration of how public

opinion led to legislative action after the courts had repeatedly refused to change the rule or precedent.

Thus we lead the student to realize the relation between the common law and the statute law, and to note the fact that the large bulk of our law was worked out in the decisions by the courts of actual cases which established precedents for succeeding cases. We show him how statute law has followed common law, to correct and supplement it, not to displace it.

The lengthy discussion above was necessary, first, in order to show the teacher how to impress upon the student the way in which law grows; secondly, in order to show the teacher how to lead up to definitions or distinctions such as between common law and statute law; and thirdly, to show how the student is to be introduced to an understanding of the function of our courts. One more point to be noted carefully by the teacher is that the definition should be developed by means of examples, and not stated in dogmatic form. Nor should the preliminary topics be presented entirely in lecture form. A certain amount of appeal by means of questions to the experience of the student will insure his attention and his participation in the work, and will keep the teacher from going beyond the student's depth.

To sum up: the preliminary lesson should, by means of practical examples, bring out the purpose of commercial law, the function of our courts (without any account of technical procedure), the function of the appellate courts, the establishment of a precedent, the change of a precedent, and the distinction between common and statute law. Other matters in connection with remedies, such as the distinction between courts of law and courts of equity, the meaning of such terms as judgment, execution, etc., had better be explained as the need arises in connection with later topics.

METHODS OF TEACHING

What has been said before will sufficiently bring out the fact that we do not incline to any lecture method or to such a use of the text-book as will make the recitation a matter of memorizing unintelligible rules. The discussion of the prevalent methods in the professional law schools will throw some light upon methods of teaching in the secondary schools, and we shall therefore discuss the relative merits of the text-book and the case methods, in order to draw some conclusions regarding methods in commercial law.

Text-book Method. — No law school to-day uses the lecture method, because the teacher realizes that a knowledge of principles is to be derived only by discussion and application of them to numerous cases. The text-book, the basis of the method used in many law schools, presents a digest of principles or rules deduced by the author from the decision of the different courts. References to these decisions accompany the text, and the students are expected to look up many of these references, in order to see the source of the law in the particular case from which it was obtained. This method may be said to be the method of deduction. It presents the rule ready made, but gives it justification by illustration. Intelligent users of this method also give the students abundant practice in the application of the rule to problems, thus furnishing both the necessary drill and material for the discussion that is so important in developing the trained legal mind.

Case Method. — Within the past quarter of a century, under the stimulus of the example of the late Dean Langdell of Harvard, teachers of law schools have adopted the Case Method. This is the inductive or development method

applied to the teaching of law. A series of cases in full, containing both the facts and the decision of the court, are presented to the student. These cases are so graded in their sequence, as to develop the principles of a particular subject, like contracts, in a logical sequence. From a perusal of the case the student draws the particular rule of law that is established by the decision. In spite of certain disadvantages which will be noted, this method marks a rational advance in methods of teaching. Its advantages may be summarized as follows: (1) It is inductive. Instead of beginning with an abstract principle of law, which has to be made intelligible by examples, it leads up to the rule from a particular state of facts. (2) It gives the student a realization of the growth and development of legal principles by confronting him with situations which led to the establishment of these principles. This is due to the inductive sequence which it follows. In several of the Harvard case books, the cases are presented in historical order, so that the student sees the evolution of a particular rule of law. (3) It adds interest to the study of law by furnishing a common basis for discussion. The facts and the decision of the case are before every student, and discussion of various phases of it is thus facilitated. (4) The case method is in line with the improvement of professional instruction in other fields. This improvement consists in the combination of laboratory methods with the theoretic instruction. The introduction of the university school marked a great advance in the training of the professional man, who formerly prepared by a purely empirical method. Thus the candidate in medicine used to assist the physician, and by the apprentice method pick up both his theoretic and practical knowledge. The law student "read law" in the office of a lawyer, where, it

is true, he became familiar with the legal procedure, but where his theoretical training was rather desultory, owing to self-directed and misdirected effort.

The university school changed this by providing systematic instruction and preparing the student to apply his knowledge, after graduation, to the practical requirements of his profession. The next advance came when it was realized that theory and practice ought to go hand in hand, and that practical training in the application of principles should be given to the student, so as to make him efficient by developing his judgment and skill. Thus was introduced the clinic in medical instruction and the case in law instruction. In spite of certain disadvantages, which are not at all insuperable, the case method has come to stay.

What are these disadvantages? (1) Not enough ground is covered. There are too many ramifications of a particular subject, like contracts, and unless we make the case book of a prohibitive size, it is impossible to cover every subdivision by means of a case. The advocates of the text-book claim the advantage here, because of their ability to cover the ground completely. In reply to this objection it may be said that the object of the instruction is not to cram the student full of law, but to teach him how to reason upon the law, and how to search for it, when he needs it. The finding of the leading principles by means of a comparatively small number of cases is sufficient to accomplish this purpose.

(2) The method is too difficult. The language of the decision, especially in the older cases, may offer obstacles to students. This objection is only valid for students of secondary school age. Professional students should be trained how to meet difficulties of this sort.

(3) The decision in the case may include several questions

which are not relevant at that particular time to the principle under investigation. This objection may be met by arranging the case so as to eliminate phases not germane to the topic. But even if the case is presented as a whole, the intelligence of the student should be trained to make the proper selection.

In conclusion, it must be said that all pedagogic arguments are in favor of the case method, and particularly of a modification of it, by an improvement on the ordinary case book. This is the presentation of some of the cases in full, and the addition of other cases as problems, by the statement of the facts alone. This gives the necessary supplementary drill and training in judgment, and stimulates the student's power of initiative.

Application to Secondary School Teaching. — How, under conditions as they confront us, can we secure the advantages of the case method in secondary school teaching? The full benefits can be obtained only by a method of condensed cases. Evidently the limited time devoted to the subject will not permit a study of complete cases. Moreover, such a study would be practically impossible, because of the technicalities and matters of legal procedure that are so often connected with the statement of facts and the decision. It is possible, on the essential topics, such as contracts, sales, and negotiable instruments, to present a series of condensed cases, in which the facts could be stated briefly, and the salient points in the decision given in the language of the court. In fact, the authors of this work have such a case book in manuscript. A recent work on commercial law for secondary schools promised the presentation of actual cases to the student. When it was examined, it was found to be something entirely different. The author of the work had summarized the principles, and then presented a series of problem cases of a

difficult nature, citing the name of the case and the volume and page where it was to be found. Now there was very little in the text itself to help the student or the teacher to solve the problem. The book was another illustration of the faulty form of the deductive method which thrusts abstract rules at the students, and expects that this alone will make them proficient in the application of these rules.

In view of the fact that a desirable case book for secondary schools has not yet been published, we must ask how we can secure some of the benefits of the case method or the inductive method with the text-books we have.

In order to answer this question, we shall have to consider the subject of special methods in commercial law.

Special Methods. — Sufficient has been said to show that the proper way to begin a topic like contracts or agency is not to give a definition. A student ought to be made to realize the way in which the topic presented arose out of the conditions of modern business. The *first phase*, then, of every new topic is to show its correlation with business practice, and to bring out the way in which it serves to satisfy a certain need. As an illustration, we may take the subject of Agency. The teacher does not begin with a definition of agency, but presents the conditions of modern business under which it is impossible for a person to attend to all the details of his work himself. The student is made to realize the necessity under which the business man delegates at times both matters involving discretion and matters involving mere routine. This at once suggests the question to whom a man may delegate his work, what the powers of this agent are, and what his legal rights and liabilities are. Thus the way is opened for an outline of the entire subject in its correlation with business itself.

The *second step* is the presentation of the first legal phase of the particular topic. In the subject of agency, it is necessarily the question how the power of the agent is conferred upon him, and what conditions may arise which will entitle a man, by implication, to be considered an agent, even without express authority. An obvious way to handle this topic is to give a summary of the various ways in which the power of agency is conferred, and then ask the student to apply the principles learned to problems. This is the path of least resistance, but it is undoubtedly not the best way. A series of situations should be presented to the student in which the question of whether a person really has the power to act arises. Students may be asked to give their reasons, and compare their answers with the rule of law, which the teacher will state to them. In many cases the answers will coincide with the actual law. This is not strange, because in spite of their many technicalities, legal decisions as a general rule are organized common sense. If a condensed case book is available, the student will be able to peruse the problem and its solution and see the law as it is developed by the court, from a given state of facts. In such a case, the condensed cases would be assigned preparatory to the discussion in the class. If a text-book is used, however, the exposition in the text-book should be assigned as a lesson supplementary to the discussion in the classroom.

The *third step* is this: the student states underlying rules which have been established by the court, and he discusses the reasonableness of the rule. A teacher should not hesitate to allow a student to criticise the judicial decision, where he seems to think that it is not founded upon good reason. The danger that students will develop a contempt for the judgment of the court is negligible. There is nothing that will sharpen

their power of discrimination and their respect for the common law more than the discussion of the reasons which actuated the judges in their decision. In the vast majority of cases they will find that the rule is reasonable, and that it works substantial justice.

As a *fourth* consideration : the rule of law itself is of no value, except in so far as it is applicable in the solution of actual problems. The lawyer does not study the principles of law for their own sake, but because he needs those principles to meet all the intricate situations that arise, upon which he is consulted. A person may know all the rules of law and yet make a poor lawyer because his power of discrimination — his ability to see that a certain state of facts is to be decided by a particular rule — has not been developed. He knows the rule, but he does not know that it fits a given set of circumstances. This ability can be developed only by constant practice in the solution of legal problems.

One mistake, however, is commonly made in connection with this drill. In a subject like negotiable instruments, for example, writers of elementary text-books will present all the rules on a given subject, with a few illustrative cases, before they give any drill problems. This is a serious mistake. Each lesson should include numerous drill problems. For example, after the formal requisites of negotiable instruments have been considered, the student should be given numerous cases in which the question of whether or not these formal requisites have been complied with is the point at issue. To provide material for this purpose, the teacher will have to present mimeographed problems to the student. To read off the problems from a book and make the pupils give the solution is too much of a strain on the attention of most of them. All the members of the class ought to have the particular

problem before them so as to be able to give a decision, after a couple of moments' thoughtful consideration of the question.

In connection with effective drill, the reader is again advised to consider the effective results obtained from using Socratic questioning at this stage of the lesson. To illustrate: the student reads over the facts of a case, which we might call the hypothesis (using the analogy of geometry), and he gives the decision that is applicable to this state of facts. But it may be that certain distinctions have escaped him in his reading of the facts, which differentiates this case from the one with which he is familiar. His answer is therefore wrong. If the teacher merely corrects him without any comment, he loses a valuable opportunity to train the student in accuracy of judgment. He should lead him to discover his own error by Socratic questions which bring out the fact that the student has not properly read his question. The lesson which he learns by this questioning will lead him not to make snap judgments, and to weigh his answer carefully before he gives it.

For a *fifth* consideration another useful exercise in the application stage of the lesson is to vary the hypothesis, or the state of facts, and to let the student realize the change in the decision which such a change in the hypothesis produces. Thus, in connection with the subject of Guaranty, assume that A guarantees orally that he will pay B's debt to C, if B does not pay. The students see that this guaranty cannot be enforced, because it is not in writing. The case is then changed by having A tell C to extend credit to B and he will be responsible for it. This case calls attention to the fact that A binds himself primarily to C by his agreement, and as this is not a guaranty in the real sense of the word, the oral contract is effective. By thus changing the state of facts in the case,

we impress upon the student a better understanding of the meaning and the application of certain principles.

In the *sixth* place, concrete methods should be used wherever possible. In all we have said about methods in commercial law we have emphasized the importance of avoiding an abstract presentation, and of making a student see the relation between law and actual business. It is this motive which leads us to include business and legal documents in our course. Is it necessary for the student to understand legal forms? is the question that is often asked. Not such as involve mere legal procedure, such as the summons or complaint. Nevertheless, every good text-book reproduces in facsimile such legal forms as contracts, negotiable instruments, powers of attorney, bills of sale, deeds, etc. The purpose of this presentation ought to be not so much to teach the student how to make out these documents himself, as to give him concrete illustrations of the applications of the principles. In some cases, it is true that it would be a valuable exercise for the student to draw up certain documents, like contracts or articles of copartnership. The purpose of this exercise would be to test the student's knowledge of the essentials that are necessary in such documents. A still more valuable exercise would be the criticism of some of the documents drawn up by the students, in order, with the aid of the class, to discover the respects in which these forms are deficient, and in which they reveal legal flaws. The thing for the teacher to bear in mind is that it will not be necessary for the student to use the exact verbiage of formal legal documents. To compel him to do so will be to burden his memory unnecessarily, and, as a general rule, the hallowed legal phraseology is, in most cases, unnecessary to the legality of a document.

Another way in which legal forms may be of value is to

give the student the opportunity to fill out blanks that are furnished to him. Most legal forms may be bought at the stationer's, so that the task of the lawyer is confined to the mere filling out of the blanks. Work of this sort may be very useful to the student in sharpening his knowledge of the essentials required in certain documents. In this connection, the teacher may coöperate with the department of typewriting, so that students may fill out their blanks in typewriting, using data to suit themselves.

Additional Notes on Method. — 1. *The Selection of Cases.*

We have already said that the teacher should not wait until he has presented all the principles of a certain subject before he gives applied problems. And we have also said that the teacher should have a sufficient number of mimeographed problems selected from the abundance of material found in different text-books to present to the student in connection with the drill work. When a subject like contracts is completed, then it is appropriate for the teacher to give miscellaneous cases on the subject, so as to bring the various subdivisions of it in review in the student's mind. There are certain additional remarks on the selection of the problem cases and the proper use of them that may be of value to the teacher.

(a) They should be graded in difficulty. It is unfair to expect students to wrestle with some of the refined distinctions that have engaged the attention of courts, unless their minds have been properly prepared for the work by judicious drill upon easier cases.

(b) On the other hand, the problem cases to be selected are to be such as to require some points of reflection so as to make the student feel that the solution represents a definite advance in his knowledge of law. Evidently leading questions, that is,

those which suggest the answer, are to be avoided, as they are not conducive of reflection.

(c) The teacher should never accept the answer "yes" or "no" without an intelligent reason for the answer. Any other attitude will only be conducive of guesswork. Even if a student has given a wrong decision, if his answer is based upon fair reasoning, he should be given at least a passing mark. It is scarcely necessary to say that such cases are to be preferred as contain points that lend themselves to discussion, or to the taking of opposite sides of the question. The great majority of cases are of this sort. Sometimes, however, there are cases where all the right is obviously on one side. These have their place in the course, but they are evidently not so valuable for training the student in making acute discriminations as those in which the issues are fairly evenly balanced.

(d) Except in connection with miscellaneous review, cases presented, as a rule, should not contain more than one difficulty or aspect of the law. A case, for example, may contain elements of agency, corporation, technical procedure, and possibly other steps. To give such a case, in connection with the preparatory subjects of a pupil's work on a particular topic like agency, is to tend to confuse his mind. The pedagogical principle of one difficulty at a time ought to be borne in mind. In review cases, it may be well frequently to present cases that may be approached from several angles, and it is a distinct advantage to be able to do so at times.

(e) It goes without saying that the facts of the problem cases should be stated clearly and without any omission of essential facts. Writers of elementary text-books who are compelled to save space, owing to the necessity of compressing so many topics in a small volume, frequently state the problem, and omit essential facts. This is hardly wise, as a rule.

Sometimes it is permissible to present a case in that brief form so as to compel the student to answer the question by supplying hypothetical facts which the author of the problem has omitted. But such cases should not be given on examinations. To illustrate this point, the teacher may present to the class a case in which a person has sold orally sixty dollars' worth of goods to another person, and ask them whether the contract can be enforced. The statement of facts is incomplete because the obvious answer of the student that the sale cannot be enforced under the Statute of Frauds depends upon whether the alternatives to a written memorandum, namely, part payment or delivery and acceptance, were applied.

(f) An attempt should be made by the teacher not only to stimulate the judgment and reason of the students, but to arouse their imagination in connection with the cases. It may seem strange to say that their imagination should be appealed to in connection with law, because it may be said that cold hard facts and reasons are used, not imagination. But the purpose of stimulating the imagination is not to lead the students to do any guessing, but to make them see the reality of the work they are doing, and its relation to everyday business life. For this reason, the facts in the case should be such as actually occur in daily life.

Examiners and writers of problems are in the habit of using A and B as the names of the parties. This may be very convenient and safe at times, but it does not tend to make the case real to the student. As far as possible, the real names of persons and places should be used. Occasionally it is true that the use of letters A, B, and C is helpful in the apprehension of the facts of a case. Thus if three parties are involved in a negotiable instrument, A as the maker, B as the payee, and

C as the indorser, the use of these letters is certainly helpful in the apprehension of the facts of a case. It might therefore be advisable not to be too dogmatic in the matter of requiring real names to be used in all cases. A discussion of the facts of the case with reference not merely to the legal principles involved, but with reference to aspects of business procedure and business ethics, is very valuable. This discussion brings consciously to the mind of the student, matters of business ethics, points of attack he should guard against, and methods he should adopt in order to safeguard his rights. The teacher should therefore not fail to draw lessons for practical conduct wherever it is possible to do so, points which not only deal with business and personal ethics, but points which develop a right attitude of mind toward our institutions.

2. *Reviews and Examinations.* — No matter how well a subject is presented, the review cannot be dispensed with. A student who has completed his negotiable instruments six months before may find that many of the details of this technical branch of commercial law are only faintly in his mind. It is true that the cases on one topic frequently are interrelated with phases of another topic. But to rely upon such an accidental review is rather hazardous. It is possible to provide some form of continuous review throughout the course. For example, after we have completed sales of personal property, we give a miscellaneous review of all phases of the subject, presenting cases not in the order in which the topics were developed in the text, but in an irregular order. The presentation of the problems in the miscellaneous review in the order in which the topics occur in the text may suggest to the student the exact place where he is to find the solution of the difficulty; and in a review we want to take away a crutch of this sort. In addition to the miscellaneous review on sales, a number of

review problems on contracts may be given, thus keeping some of the distinctive principles of contracts before the students. In the same way, perhaps, a part of a period once a week should be devoted to a miscellaneous review on all that a student has had on the subject up to the time. This review may be in the form of a written examination, in the form of an oral review, or in the form of home work assignment to be brought in in writing.

The examination is a valuable thing because it trains the student in quickness of decision and in bringing all the resources at his command to bear upon the solution of the problem in a limited time. One kind of an examination question should be very sparingly used; that is, the definition. It is easy to cram definitions, but impossible to cram solutions to problems. Therefore, if the examination is devoted exclusively to problem cases, the charge that it encourages cramming is entirely avoided. Again, some teachers ask the students for a summary of rules on a certain question. This is very inadvisable; first, because it encourages cramming, and secondly, because a knowledge of a set of rules is of practically no value as such. The important point is that the student should know how to apply a rule.

Many lawyers would fail in an examination if they were required to formulate sets of rules. Such a test would be merely one of memory. Thus, a lawyer might be asked for exceptions to the liability of common carriers, and fail to answer the question, even though he might be familiar with all the exceptions, — the reason for his failure being that for the moment the points do not come to him. But he will not be phased by a question in which his decision on a given state of facts is required. We must therefore conclude that the only fair and practical examination is one in which the student is

asked to give decisions and reasons in a set of problem cases. Occasionally, questions of principles may be required, but they should not be of such a nature as to require him to enumerate five or six exceptions to a rule.

3. *Research Work.* — As we are not training students to be lawyers, it is scarcely necessary to offer them much of an opportunity to conduct research work of their own on points or problems of law. They are so occupied with their various other duties that time scarcely allows this. There may, however, be a few exceptional students who take an interest in this kind of work, and who may contemplate entering the profession of the law. Such students should be given the opportunity to learn something about how to get at the sources of the law, how to use reference books, and how to discover the law on a certain subject, when one requires it. In fact, every student should learn how he must proceed, that is, what sources he must try to get at, in order to discover the law on a particular point. But the preparation of briefs or special reports on some topic may be confined to two or three of the exceptional members of the class. The topic chosen for investigation should be one on which authorities have disagreed. The elementary text-book frequently makes mention of the fact that some jurisdictions hold one view and some another. It would be interesting for some particularly bright student to investigate the conflicting authorities on this point, and to summarize the arguments in favor of one decision and those in favor of the opposite decision. If the student makes a report of his research to the class, he will vicariously, so to speak, bring all the members of the class in touch with the original sources.

4. *The Teacher's Library.* — The demands upon the good teacher of commercial law who really carries out his task

well will be very great. It would be beyond the demands of human reason to expect him to be proficient in all the branches of a subject. But he should be in a position to have access to some of the sources of the law, and to be able to use all those aids by which he may become proficient in the particular topic which he is presenting to the class. It is not too much to expect that the teacher has prepared his lesson so well, that even though he is not a lawyer he knows as much as a lawyer, for the time being, at least so far as this particular subject is concerned.

Should the teacher use a key to problems, or is this use of the key unworthy of his intelligence? One thing is true, that he should not use the key in the presence of the class. On the other hand, it is unreasonable to expect him to have an absolutely perfect knowledge of all the cases, without the aid of the key; and it is undesirable that he should, by using his unaided judgment, give the class a wrong solution of the problem. The use of the key is therefore not at all reprehensible. But of course its use should be confined to the teacher.

As a part of every teacher's equipment there should be a fair professional library. This should include: *first*, a series of standard texts on different phases of the law. By texts we do not mean elementary books for secondary schools, but presentations of phases of the law by authorities: such works as Pollock on Contracts, Huffcut on Agency, Cook on Corporations. The Hornbook Series, published by The West Publishing Company, of St. Paul, are a set of authoritative texts on various subjects, which have the distinction of being comparatively brief, and of singling out the essential rules by means of heavy type.

Second. A series of case books on different subjects, such as Williston on Contracts, Ames on Bills and Notes, and

other case books, will be found very useful to the teacher, because he will thus have the opportunity, occasionally, to read to the students authoritative decisions on certain points in the language of the court. The students will thus be brought a little nearer to the sources of the law, and ambitious members of the class will have access to them if they desire.

Third. If there are funds available, an encyclopædia of law would be useful. But as between an encyclopædia on the one hand, and case books and text-books on the other, we should certainly prefer the latter.

Fourth. A collection of secondary schoolbooks will be useful to the teacher, both for supplementary review cases and for possible light they might throw upon the best sequence of the presentation of topics.

Fifth. A collection of the statutes of the state. Thus, in New York State, the volumes comprising the Consolidated Laws may prove very useful. There are two subjects on which there is a tendency to uniformity in the different states in the Union, — negotiable instruments and sales. The uniform acts of both these subjects should be a part of the reference library. If possible, annotated editions of these statutes should be secured.

Sixth. After all that is said about the importance of a library, the most important reference library to the teacher is the advice of some lawyer, who is both able and willing to help the teacher with advice on some of the difficulties. This source of aid is particularly important because of the necessity of adapting the principles of the common law, as presented in the text-book, to the possible modifications which it has undergone in the particular state of the Union in which the school is situated. The most helpful counsel that a lawyer can give

to a teacher corresponds to the greatest help which the teacher can give to his pupil, and that is, to show him how to help himself.

OUTLINE LESSONS IN COMMERCIAL LAW

I. *Outline Lesson on the Fourth Section, State of Frauds*

Preparation. — (1) *Introduction.* Common law requires no contracts to be in writing.

(2) *Motivation.* Difficulties in proving contracts by means of witnesses; danger of perjured testimony and possibilities of blackmail in certain cases, such as sales of real estate and promises of dowry in marriage contracts.

Presentation. — (1) Passing of a statute by parliament requiring certain contracts to be in writing, signed by the party to be bound, in order to hold him liable.

(2) Significance of term "Statute of Frauds" explained. (Statute to prevent frauds and perjuries.)

(3) Relation of this act of parliament to our state statutes. (Brief historical review of the source of our laws.)

Exposition. — (1) Summary of the classes of contracts as included in the fourth section of the State of Frauds. (Seventeenth section, on sales of personal property, left for another occasion.) Reason for the inclusion of each class by illustration of the possibilities of fraud and perjury connected with each.

(2) Illustration of contracts for the purchase of real property, contracts not to be performed within one year, and contracts in consideration of marriage. Illustrations to be given principally by members of class. Wrong illustration to be corrected by Socratic questioning.

(3) Further analysis of the terms of the statute. Illustration of a written contract between A and B, signed by

A alone, held by B. (B can hold A, but A cannot hold B.) Requirement that contract must be signed by the party to be bound. Practical application of this requirement. Both A and B get copies of the contract; A signs B's copy and B signs A's copy.

(4) Formal statement of the terms of the Statute of Frauds.

Application. — Cases involving Statute of Frauds. Remarks on cases to be selected:

(1) Cases involving refined distinctions between real and personal property are to be avoided. The cases to be presented are to impress upon the mind the necessity of complying with the Statute of Frauds.

(2) Cases to be selected are to contain some points that require a little reflection.

Examples: *a.* A written contract contains no signatures or the signature of the party that is suing. Is it valid? (Question not to be presented in this abstract form. Actual case is to be presented.) Point of law involved in the case as well as the solution should be formulated by student himself.

b. A written contract contains the signature of B alone. Can A sue on it?

(3) Cases to be selected are to contain points that lend themselves to discussion.

Examples: A contract is not signed at the bottom, but contains the signature of the parties on top of the instrument. Does it satisfy the requirements of the statute?

Discussion. — Teacher sums up the discussion and states the side the courts have taken in their decision. (For other remarks, see p. 329 *seq.* Note especially what is said on the use of the Socratic method, p. 327.)

(4) Cases to be selected, to illustrate that oral contracts under the Statute of Frauds are voidable, not void. Fact

brought out by the following example: A sues B on an oral contract for the sale of real property. No defence. Can he recover? *Answer.* Yes, if B does not take advantage of the defence of the Statute of Frauds. Court will not recognize it otherwise. Hence reason for calling contract voidable, not void.

II. *Outline Lesson on the Distinction between Real Property and Personal Property*

Preparation. — *Motivation.* (1) Importance of distinction. Student should be made to realize that distinction is not merely academic, but has real importance. This may be done by presenting case of an oral contract for sale of certain property (like fruit trees), and showing how the question of the ability of interested party to enforce contract depends upon whether fruit trees are real property or personal property.

(2) Other instances of importance of distinction are mentioned to pupils. *a.* Realty goes to heirs of a decedent directly, while personalty goes to the executor to be administered by him, and to be charged with the payment of debts of decedent. *b.* A mortgage on a house is foreclosed, and the house is sold for the benefit of the creditor. Can the furnace in the house be sold with it? Can the window shades or the tools used in connection with repairing the house be sold? Answer depends upon whether these are realty or personalty.

Presentation. — (1) Case involving contract for the sale of land on which house is situated. The terms of the contract do not mention the house. Is the latter included?

(2) Case involving sale of land on which there are fences, stone walls, etc.

Generalization. — Land and things attached to the land (fixtures) are real property.

Application. — (1) Cases involving the Statute of Frauds in connection with the relative claims of executor and heirs, the foreclosing mortgagee and the mortgagor, and dealing with things attached to the land.

(2) Cases showing the effect of tenant's placing fixtures on property. Formulation of rule with regard to tenant's fixtures and tenant's trade fixtures.

Second Presentation. — Cases involving land sold, on which crops are growing.

Second Generalization. — Formulation and discussion of rule with regard to question whether crops are realty or personalty.

Second Application. — (1) Cases involving question of validity of oral sale of crops, of ownership of crops as between executor and administrator, etc.

(2) Miscellaneous cases on distinction between real and personal property involving cases on fixtures, on crops, and other cases not discussed before, to test power of original thinking. Illustration: Question whether the following are real property: Stock in a realty corporation, soil severed from land, growing trees to be cut down for lumber.

NOTE. As there are at least two important topics connected with the distinction between real and personal property — (a) The rules with regard to personal property attached to the land becoming real property (the doctrine of fixtures) and (b) the rules with regard to things which are of the land (like crops), but which are considered as personal property under certain conditions — the rules connected with each one of the topics should be developed separately. Hence, this lesson contains at least two different lessons, each one having the steps of presentation, generalization, and application.

SUMMARY

The teaching of commercial law in secondary schools must, as a general rule, be intrusted to persons who have had no legal training. A knowledge of the purpose of the study will be of great help to the teacher in giving him the right point of view in teaching.

The purpose of the study is (1) to enable the business man to prevent litigation by safeguarding his rights at the time when he enters into his contracts; (2) to give the student who will specialize in accountancy the necessary correlated knowledge of law; (3) to give the student a better knowledge of our institutions and his duties to the state and other individuals; (4) to give him mental discipline, — particularly to train his judgment; (5) to throw strong side-lights upon related subjects, like the history of commerce, accounting, and arithmetic.

In order to organize the study properly, we must limit the number of topics included in the study, and emphasize some more than others. Topics of the first line of importance are contracts, sales, and negotiable instruments; topics of the second line of importance are agency, partnership, bailment and common carriers, landlord and tenant; topics of the third line of importance are insurance, guaranty and surety, and corporations.

A few preliminary topics should precede the substantive study of commercial law, such as the function of the courts, especially the appellate courts, in relation to commercial law, the meaning of precedent, how a rule of law is established, how it is changed, and the distinction between the common law and statute law.

The general methods of studying law are the text-book method and the case method. The latter is the method used in the leading law schools, but in its strict form is not adaptable to secondary schools, because there is no available case book. But even with present text-books, some of the benefits of the inductive or case method can be secured. This leads us to discuss the following special points in method:

(1) Every new topic should be introduced in correlation

with business, and in view of the way in which it satisfies the needs of commerce.

(2) The principle of law should be presented next.

(3) The cause and the reasonableness of the rule should be discussed.

(4) The rule should be applied to a large number of cases, and the Socratic method used in correcting wrong answers.

(5) Documents and legal forms help to make the study concrete.

In the handling of problem cases the following points should be observed: They should be graded; they should present one difficulty at a time; the statement of facts should be brief, without omitting essential points; and the cases should be made real, by correlating the facts in them with actual business.

There should be a continuous review of preceding topics by a large number of miscellaneous reviews throughout the course. The examination in commercial law should not be on definitions or rules but on cases.

Research work may be given to a limited number of ambitious students, in order to give them a first-hand acquaintance with the sources of law. As a part of every teacher's equipment there should be a fair professional library, including standard text-books, case books, secondary schoolbooks, a collection of statutes of the state, and, if possible, an encyclopædia of law.

EXERCISES

GROUP ONE

1. Tell what means the teacher who has not had a legal education should adopt, in order to make his teaching of commercial law effective.

2. What is the broadly practical and the narrowly utilitarian purpose of the study of commercial law?

3. Why is a knowledge of law essential to the good citizen and to the man of culture?

4. What principles would guide you in limiting the field of commercial law, and how would you determine the relative emphasis to be laid on different topics?

5. Give the advantages and the disadvantages of the case-book method of instruction.

6. How would you proceed to give the student an idea of the importance of "precedent" in law?

7. Illustrate the use of Socratic questioning in correcting wrong answers in law.

8. To what extent and why would you allow criticism and arguments on the reasonableness of certain principles as established by judges?

9. What principles would you bear in mind in selecting and assigning problem cases to the class?

10. What use would you make of legal forms and documents? To what extent would you let students draw up such forms?

GROUP TWO

1. What phases of the law of evidence would you give to a class of pupils who intend to specialize in accountancy? Why?

2. If a pupil wants information on a topic like the statute of frauds in your state, with reference to sales of personal property, how would you direct him to find the information?

3. Give an outline of a lesson or a series of lessons on the legal effect of indorsement.

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CHAPTER XII

ECONOMICS

FUNCTION OF THE COURSE

THIS subject properly forms the culmination of the entire business course. Its function is to organize and classify the student's knowledge of business, in accordance with the fundamental principles and laws that operate in it. It is therefore designed to give him the proper outlook upon business policy, by teaching him how to weigh principles and actions in the light of fundamental laws. For that reason we may call the subject the philosophy of business. A knowledge of this is essential to every good citizen, because questions of governmental policy are so frequently economic in nature that the citizen who votes on matters of this sort should have some means of estimating the arguments *pro* and *con* of every question, instead of having to depend upon rule of thumb, or specious arguments of politicians. Moreover, sound economic policy in business is dependent upon a knowledge — which, it is true, some persons who have never studied economics possess by intuition — of the fundamental laws of economics. And no person who has studied it will be attracted by fraudulent advertisements which promise exceptionally high returns upon an investment. For the economist realizes that safety and rate of return are in inverse relation, and when a certain business proposition offers high returns, he knows that it requires investigation. If he chooses to invest, he does so with his eyes open, knowing the risks he must run in doing

it. But he is rarely taken in by the mere glittering prospects laid before him. The number of illustrations on the value of the knowledge of economic law may be multiplied indefinitely.

The basis of preparation of the student of economics is a knowledge of the concrete phases of business, and a description of the forces which operate in business. In such subjects as commercial geography, for example, the treatment was more or less descriptive. It is true that the organization of facts in accordance with causal relationship was insisted upon; but the organization of the facts under economic laws was not taken up except incidentally, because the mind of the student was hardly mature for this kind of systematization. Before the study of economic theory can be taken up, the student must be well grounded in the facts relating to industrial life. Many economic theories appear half baked, just because those who formulate them have not taken the trouble to found them upon a large basis of fact.

In view, therefore, of the large presupposition of experience on the part of the student, a deductive treatment of the subject may be justified here more than in any other stage. The abstract principles will not appear so abstract, because the minds of the students have been prepared for the work. Nevertheless, extensive application to concrete facts of business should make the abstract principles alive and real. Therefore, to give the student economic law, without illustrating its workings in real life, is to give him an empty formula. There is no objection, however, to beginning the subject inductively, so as to establish the purpose of the subject. Thus, the basic principle in our economic life is the existence of desires. Our pupils may be guided to establish the existence of such psychologic phenomena by a series of questions aris-

ing out of the general query, "Why does your father work?" This exercise might be followed by another in order to establish the intensity of desires which will be found to be in the order from necessity to luxury, or, more specifically, from food, clothing, and shelter, to the desire for pleasure. Another task which may be assigned in the preliminary stage is a division of occupations into extractive, convertive, distributive. A successful means of accomplishing this end is to arrange the various occupations with which the pupils are familiar, and then to group them in accordance with their nature or function. Though some of this work may have been done in connection with earlier topics, it may be repeated for the sake of a firm foundation.

Even our writers of modern text-books have recognized the necessity of a certain inductive presentation of economics in their text so as to trace its principles in a more satisfactory sequence. Thus, the psychological school of economists begins the subject with a consideration of consumption — the satisfaction of certain needs which exist in man. This leads to a consideration of the means by which man may satisfy those needs, and brings up the subjects of production and distribution. This sequence should be followed by the teacher also.

DIFFICULTIES AND HOW TO MEET THEM

(1) Ground to be covered. In the time assigned to the subject in secondary schools, it is evidently impossible to do full justice to all its phases. One difficulty in covering the ground has been the inadequate basis of experience on the part of the student. We have tried to meet this difficulty in our course by providing a special course on the technique of commerce and industry, in which many of the descriptive

phases can be treated, to the relief of the course in pure economics. Thus, it is a burden on this course to be compelled to consider such details as the concrete workings of the clearing house or the stock exchange. Such descriptive phases should be treated in the other course, so as to limit our work here to a very brief review, if necessary, and the consideration of the philosophy of bank clearings or stock speculation, the economics of clearing-house certificates in times of panic, etc. In our commercial curriculum we provided that the work on money and banking should come in the last year contemporaneous with the work in economics. This also would relieve the course in pure economics from the consideration of this topic, while the work in money and banking could combine both the descriptive and the philosophic phases of the subject.

Another way in which the difficulty connected with the ground to be covered may be met is by limiting the number of topics. As between a full treatment of a few selected topics and a superficial treatment of the entire field, the first is preferable. In making our selection of topics, we should be guided, first, by the relation of the subject selected to current issues, and secondly, by its relation to sound business policy.

(2) The great difficulty which economists have in defining their fundamental concepts, such as value, capital, etc., may be considered by some an argument against introducing the subject in the secondary schools. But the same argument, if applied to geometry, would lead us to exclude that subject also. Mathematicians have been unable to define such terms as straight line, angle, axiom, but this does not at all interfere with our understanding of geometric propositions that are based upon these concepts. It is true that we cannot define these terms, but we have a working knowledge of what they are. Similarly, we may not be able to define our fundamen-

tal concepts in economics, but we have a general notion of what they are.

How much time should the teacher devote to the consideration of some of the abstract terms? Extended study of the controversy which exists, as to the meaning of such terms as value, rent, and interest, is hardly desirable. The attempt to consider the differences of view regarding the definitions of these terms will lead the student into the metaphysical field, for which his mind is hardly prepared, and the results will hardly compensate him for the effort. But where a difference of view regarding the meaning of certain terms is material to the understanding of practical issues, it should receive due consideration. For example, a proper valuation of the various definitions of capital will have a material bearing upon one's attitude toward socialism or similar economic plans.

(3) The laws of economics are by no means so fixed and eternal as those of natural science. There are many economic principles, the truth of which is still debatable, and many theories, urging their claims for acceptance, which are only countenanced by a small number of men. What stand should the teacher take on debatable topics, especially where these topics have become political issues? Thus, what position should the instructor take with reference to the relative merits of free trade and protection? This difficulty is not insurmountable if we bear in mind that our attitude should be a judicial one. The student is entitled to know the arguments on both sides, and to weigh them for himself. The teacher who takes a particular stand on a question is apt to be a partisan. The proper attitude of mind is the judicial one; and it is to be assumed particularly toward such doctrines as socialism. It is not the duty of the teacher either to uphold the doctrine or to attack it, but to show both its strength and its weakness,

and leave the decision to the student. One thing the teacher should do, however, and that is to check the student from drawing rash conclusions and from becoming a narrow partisan. He should be led to suspend final judgment until such time as he is mature enough to take a final stand on the matter.

But, it may be objected, how can the student be expected to arrive at the truth, if economists themselves are not agreed upon what the truth is? The student of philosophy finds the same difficulty. In answer to this objection, it may be said that whether the student makes up his mind definitely as to where the truth is, is of far less importance than whether he realizes the existence of the issue or the problem, and the necessity of deep study and reflection to arrive at some working conclusion. The man who realizes that a difficulty exists, even though he does not know the way out, is ahead of the one who is not even aware of the existence of the problem.

TOPICS IN ECONOMICS

Though desires for food, shelter, and the satisfaction of other desires are our ruling motives for economic activity, production and distribution are more important divisions of the secondary school economics than consumption. In production, the various classes of producers should be treated of, and it should be understood why certain countries are leaders in certain lines and why others have been unsuccessful. The elements which contribute to production should be studied preferably through the medium of a typical industry, like the steel industry. A consideration of the United States Steel Corporation, both in its phases of production and organization, will serve as a means of organizing in the students' minds the principles underlying production.

Distribution is the field wherein most opportunity is afforded

for effective treatment with commercial pupils. This division of economics includes, among other headings, the marketing of finished products, transportation, and banking. If time permits, public utilities, government ownership, banking and currency problems, consular service, and other similar topics may be discussed.

Under the general head of marketing, it is well to discuss, as of fundamental importance, *place* and *time* utility. The study of English history should lead the pupils to realize that this form of utility was not always recognized. Once understood, the difference in price, due to supply and demand, season of the year and location, affords no difficulty. Various ways of selling must also be considered. This involves wholesaling, jobbing, and retailing. It also includes personal selling, selling by advertising or by salesmen, and the mail-order business. Importing and exporting, together with the related problem of warehousing, should also be discussed in this connection.

The railroads and steamships require individual attention. The establishment of transportation facilities commencing with the turnpikes has meant so much to the growth of our country that we are warranted in devoting quite some time to the topic. Besides the historical side of the subject, the effect of the public service utility boards and the Interstate Commerce Commission should be understood. The rate schedules known as *tariffs* should be discussed, so that the principle of rate making shall not be entirely foreign to our graduates. The tendency in our country toward better service rather than lower fares or rates might be contrasted with the tendency which obtains in England and on the continent. Some light should also be thrown on the relation between the railroad and the state on the one hand, and the railroad and the public on the other, so that a clearer vision shall be ob-

tained on questions involving the public ownership of such public utilities. Time will hardly permit more than a most casual treatment of the civic and political issues involved, but it is quite necessary that our pupils have some idea of the questions they will be expected to express views upon later in life.

The historical development of banking should be briefly traced so that the evolution involved shall be understood. The changes from mere safekeeping to investment loans, from monopoly to free banking, and from local and state to national banking, are the important points in the historical sequence. The enlarged functions of bankers offer both interesting and instructive material for study. The methods employed in establishing a state or national bank should be understood in general terms, while the present-day distinctions between state and national banks, and state banks and trust companies, deserve special attention. Savings banks, while not important from a commercial standpoint, are nevertheless worthy of attention. The United States Treasury and the Federal Reserve System should also be briefly discussed.

Produce markets, such as cotton, coffee, and produce exchanges, also deserve special attention. Spot buying and dealing in futures should be understood. The difference between gambling and speculation, together with the economic value of future trading, are both interesting and edifying to the average student. The great growth of stock exchanges, due to the spread of the corporate form of organization and the wider and more general public investment in stocks and bonds, is sufficient warrant for including the subject in the high school course.

Questions involving free trade and protection are bound to arise every once in a while. In order to prepare the high school pupil for intelligent understanding of the issues involved,

we are justified in devoting some time to this subject. Tariff history will have already been presented in their history courses, so that all that remains for treatment in the economics room will deal with the principles involved. Clear notions should be carried away regarding the fallacy involved in mere wage-scale differences, in failing to consider the efficiency of the worker, and the cost of transportation between the source of production and the market of consumption. The wisdom of protecting infant industries should be compared with the toll exacted from the consuming public, which suffers during the too often prolonged period prior to the maturity, and also with the policy of doing only such work as we are best suited for. The argument of the ultraprotectionists who appeal to patriotism in order to make us a self-sufficient nation should also be considered. But in presenting arguments we should avoid the appearance of being dogmatic, except where the argument is obviously fallacious, and especially where the consensus of recognized opinion on the subject is practically unanimous.

Crises and panics are a common phenomenon of our economic and industrial life. A tendency toward periodic recurrence has been detected, and some theories have been advanced regarding the "cycles of good times and hard times." Besides devoting some attention to the history of panics in our country and the cycles referred to, we should present the currency problem with sufficient fulness to enable the formation of individual opinions regarding the relation between sound banking and panics.

We have indicated but a few of the important headings suggested by a complete course in economics. There are several other topics which are extremely important, and the consideration of which must not be shirked, in spite of the

temptation to avoid embarrassing issues. These include trade-unionism, the regulation of trusts, and socialism. As was said before, the issues on these subjects should be presented fairly, and so far as possible without partisan bias. Certain questions of public finance should also be taken up, either as a part of the course or in supplementary work in connection with applied economics.

NOTES ON METHODS OF TEACHING

1. Type Method. — The development of abstract principles by means of type illustrations is an important means of making the principle concrete. As we showed before, it may be useful to bring out the processes involved in production by taking the United States Steel Corporation as a type. As an illustration of the establishment of an abstract economic principle by means of a typical illustration, let us take the economic law of diminishing returns. The principle may be established by selecting a square mile of land devoted to potato-growing. It will be evident that a piece of a given fertility may be made to produce more than the product which would result from the efforts of one man working without any tools whatsoever. But it is also evident that if we were to hire enough men so as to place one upon each single square foot that the wages would exceed the value of the output. Somewhere between one man and a thousand, let us say, is the proper mean. A problem may be formulated easily in which, by a comparison between the value of the product resulting from the employment of various combinations of men and tools, we discover the most satisfactory combination. The application may be made to a factory or other industrial organizations, and similar tests applied.

2. Application of the Historical Method to Economics. —

The orthodox school of economists of the type of John Stuart Mill made the mistake of discussing the principles of economics from the standpoint of a particular state of society. They disregarded the fact that whether a principle is true or not may depend upon the conditions to which one tries to apply it. This historical point of view is very important in discriminating between two opposing points of view on a certain question. Some of the advocates of protection or free trade, for example, speak of their respective doctrines as if they represented eternal truths, regardless of circumstances. There is no absolute or eternal truth, either in the protectionist or the free-trade policy. The truth of the doctrine depends to a large extent upon the economic condition of the state of society to which the policy is to be applied. Even the most rabid free-trader will admit that the protectionist policy was responsible for the development of great French and German industries. But, likewise, the fanatical protectionist will have to concede that the English cotton industry needs no protection, and any duty on cotton goods in England would be really a burden to the consumer.

The historical phases of economics are important, not only because of their culture aspect and their correlation with industrial history, but because they determine the right attitude of the mind toward economic questions. The most vehement advocate of the free coinage of silver recognizes that the issue is absolutely dead to-day, because of the enormous gold production of the past fifteen years. Questions of economic policy should therefore not be determined from the standpoint of their absolute truth, but from the standpoint of their truth relative to conditions as they exist in a particular time and place.

3. The Use of the Seminar Method. — In the college or university course, a required part of every student's work includes research on some special topic in economics, in addition to the general work of the class. A limited amount of special investigation is advisable, just as it is advisable in the history work in secondary school to assign special essays, in the preparation of which the students obtain some acquaintance with sources and authorities, and some practice in weighing evidence. Similar motives apply in economics. One application of this method is the arrangement of debates on economic questions. Informal debates or discussion in the class should be resorted to at all times, because they bring out the freest discussion on the part of the members of the class. But formal debates, requiring close preparation, are not so good as special investigations on some particular topic. The attitude of the debater is one of narrow partisanship. Anything that tends to challenge his side of the issue he neglects, and anything that tends to favor his side he is apt to exaggerate. The special investigation, on the other hand, compels the student to investigate into the relative merits of the issue, carefully to weigh the evidence, and to give a judicial decision.

4. Application and Drill. — Sufficient has been said already to indicate the importance of applying the abstract principles of economics to the interpretation of current politico-economic issues and problems of business organization and policy.

5. Use of Graphs. — As in commercial geography, extensive use should be made of graphs. The text-books give several applications of the use of the graphs by means of which some of the abstract laws of economics are elucidated.

In conclusion, it must be said that the purpose of the course in economics is not to cram a student full of fact or to give

him a lot of patent remedies for economic evils, but to stimulate him to realize the existence of economic problems, to direct the line of thought he must follow to find the solution of those problems for himself, and to interest him in pursuing his reading and study of economic works after he has left school, and to lead him to weigh public economic questions in the light of fundamental principles, so as to make him an intelligent and broad-minded participant in our democracy.

SYLLABUS IN ECONOMICS ¹

I. Consumption. Human wants: their classification; how satisfied; why wants increase; how new wants are created and the significance of this to the business man.

Utilities: kinds of utility, elementary or qualitative, form utility, place utility, time utility, quantitative utility.

Goods: economic and free, the transition from one to the other; the law of diminishing utility; marginal utility; present goods *versus* future goods; the law of demand; the causes of increase or decrease in demand; elastic *versus* inelastic demand; stimulation of demand; the law of variety; the function of advertising; the effects of prosperity and adversity on demand; of changes of fashion; of accident; the law of least social cost.

Productive consumption and final consumption: statistics of consumption; Engel's Law; the influence of education on expenditures.

II. Production. Definition of production: value of motive force of production; value as estimate of marginal utility; the relation between value and the cost of production of the marginal producer and the utility of the marginal unit to

¹ A full outline, which may have to be somewhat curtailed by schools which cannot afford sufficient time for a complete treatment.

the marginal consumer. Normal value and market value under competitive conditions and under monopoly conditions. Explanations of the formula that monopolies tend to fix prices at the point of greatest net return. The factors in production. The products of a country depend upon: (A) Physical conditions; (B) (1) Upon the number of laborers and (2) efficiency of the individual laborer; (C) Upon the material equipment; (D) Upon the organization of the laborers and their adjustment to the physical environment and to the material equipment.

III. Nature. Nature supplies: (a) Land, (b) Water, (c) Vegetable life, (d) Animal life, (e) Natural materials and forces.

The law of diminishing returns as applied to agriculture, mines, fisheries, and building sites.

IV. Labor. The problem of population; efficiency of individual laborers depends upon: (A) Health, (B) Physical strength and endurance, (C) Intelligence, (D) Judgment, (E) Ambition, (F) Energy, (G) Perseverance, (H) Imagination, (I) Mechanical ingenuity, (J) Technical knowledge. The elements determining each of them. The efficiency of the workers as tested by unit cost. The relative efficiency of American workmen and those of foreign countries.

V. The Material Equipment — Capital. The definition of capital; the origin of capital; the chief kinds of capital goods; the distinction between fixed and circulating capital goods, specialized and free capital goods. The advantage of the capitalistic methods of production; the law of diminishing returns in capital; capital funds the result of saving; the chief ways in which capital funds are converted into capital goods: (A) Through the investment of one's saving in one's own business; (B) Through direct borrowing of savings of

others; (C) By direct borrowing through banks; production conditioned by ability and will to save.

VI. Business Organization. Simple coöperation; division of occupation; complex division of labor within an occupation; territorial division of labor; the economic stages in the evolution of our complex division of labor.

The chief forms of business organization are: (A) The single entrepreneur; (B) The partnership; (C) The simple corporation; (D) The trust or holding company; (E) Organized society, government ownership.

The advantages of large-scale production; cases where a large scale of production is not desirable.

VII. The Trust Problem. The trust; the holding company of to-day; the chief objections to the trust, extortionate prices, the watering of stock, unfair competition; political influence; remedies for each; the advantage of trusts; the Sherman Act.

VIII. Transportation. The various methods of transportation, by manual power, animal power, water, steam, electricity; the theory and practice of rates; discrimination in rates and its consequences; the work of the Interstate Commerce Commission and of the Public Service Commission of the State.

IX. Marketing Goods. The reasons for the exchange of commodities found in differences of climate, of other environment, of ability, and of wants. The law of comparative costs as the basis of exchange. The mechanism of exchange as weights, measures, etc.; the historical form of exchange; why the fair and weekly market have disappeared; the service rendered by the middleman; why he is being eliminated.

X. Money. The historic forms of money; definition of money; the functions of money; the value of money; dis-

cussion of the quantity of money ; the use of index numbers for determining a general rise or fall in prices ; the single standard ; the double standard ; the multiple standard ; the advantages and disadvantages of each ; Gresham's Law ; the issue of paper money ; reasons for ; effects ; our present money system.

XI. Credit. Meaning of credit ; benefits and evils of ; effects on prices ; the chief forms of credit paper ; uses and forms of each ; speculation ; benefits and evils ; instruments for speculation ; exchanges, brokers ; panics and financial crises ; their causes ; effects.

XII. Banking. The origin of banks ; the chief services rendered by banks ; how banks extend credit ; the nature of bank deposits ; the bank reserve and its effect ; the work of the trust company ; of savings banks ; of private banks ; the functions and working of the clearing house ; the issue of bank notes ; features of banking in the United States ; the Federal Reserve System.

XIII. Foreign Trade. Chief imports and exports of the United States and of the Port of New York ; meaning of a favorable balance of trade ; how the difference between imports and exports is made up ; the settling of balances ; bills of exchange ; how the rate is determined ; causes affecting the rates of exchange ; governmental aid to foreign trade through our system of ambassadors, consuls, and special agents ; through mail and ship subsidies ; through commercial treaties ; through bounties, tariffs, tonnage duties, etc.

XIV. The Tariff Question. The arguments for and against a protective tariff ; the difference between a revenue and a protective tariff ; reciprocity ; the most favored nation clause ; the argument for bounties.

XV. Distribution. The problem of distribution ; the

nature of income; gross income is replacement fund and fund available for current consumption (allocation fund); the effect of changes in prices on income; real income and money income; the shares in the product, rent, wages, interest, profits.

XVI. Rent. Rent; various definitions of rent; Fetter's conception of rent; the Ricardian theory of rent; the connection between rent and prices; the effect of changes in economic conditions in rent; agricultural rent and urban rent; house rents and ground rents; the unearned increment; the capitalization of rent; the taxation of rent.

XVII. Wages. Definition of; money wages *versus* real wages; time wages and piece wages; theories of wages, the iron law; the wage fund, bargain theory, productivity theories; reconciliation of these theories. The effect on wages of machinery; of the agreeableness or disagreeableness of the work; of the social esteem in which the occupation is held; of the chance for promotion; of international competition; of irregularity of employment; of education. The labor problem a wage problem; attempts at solution, premium plans, profit sharing, coöperation.

The work of the labor union, the weakness of the uniform minimum union wage; the effect on wages of the restriction of output; of the limitation of the hours of labor; of the limitation of the number of apprentices; the strike, the lockout, the boycott; the black list; of conciliation and arbitration; the Canadian system of arbitration; the labor legislation of New York State; workingmen's insurance; Workmen's Compensation Act; the work of the State and Federal Labor Bureau, women's wages and hours of labor; the child labor laws; the wages paid in typical local industries and the reason for the differences.

XVIII. Interest. Definition of; why paid; various theories; the canonist, the abstinence, the naïve productivity; the Austrian, the Socialist theory. The rate of interest; on what it depends; why the rate varies in different localities and countries; the rate on call money; on commercial paper; on long time loans; gross interest *versus* net or pure interest; causes of the fluctuation in the rate; the effect of money laws on the rate; the money rate as an index of trade conditions.

XIX. Profits. Why profits appear as a distinct share in distribution; the analogy of profits and rents; tendency of profits to increase or decrease.

Monopolies: Different kinds of monopolies, (A) Personal; (B) Legal: (1) Private, (2) Public; (C) Natural monopolies of situation; (D) Natural monopolies of organization; (E) Capitalistic monopolies; (F) Labor monopolies.

The formula of monopoly price "Point of greatest net return." How each form of monopoly seeks to obtain the greatest returns. Methods of correcting monopoly profits.

Limitations on power of monopolies to fix prices: (A) Power of substitution; (B) Potential competition; (C) Legal interference.

XX. State Control of Industry. (A) Through regulation of prices; (B) Through regulation of the industry: (1) Interstate Commerce Commission, (2) Public Service Commission, (3) State Department — Banking and Insurance, (4) Statutes, (5) The courts; (C) Through regulation of profits; (D) Through prohibition of combinations; (E) Municipal ownership — the arguments against and for; (F) Socialism. Definition of; danger of confounding with anarchism and communism; tabulation of socialistic enterprises in this state and nation; the nature of the socialistic society; its effect

on the individual; why socialism grows; its dangers; why society of necessity grows more socialistic.

ECONOMIC PROBLEMS. An intensive study of at least two economic problems: (A) The trust problem; (B) The money question; (C) The transportation problems; (D) The labor question; (E) Government ownership.

SUMMARY

Economics, as the philosophy of business, forms the culmination of the entire business course. The basis of preparation for this subject is the knowledge of the descriptive phases of business derived from the preceding studies.

In view of this knowledge, the deductive method is justified here, more than in the other subjects. But the inductive method should influence us in arranging the sequence of topics, by beginning with human needs and the means of satisfying them.

The difficulties of the study are due to the ground to be covered, to the lack of uniformity of definition of fundamental concepts, and to differences between economists regarding the validity of certain economic policies. The ways in which the difficulties may be met are explained in the text. The leading topics to be taken up in the course are then considered.

Important points on method are: (1) The development of abstract principles by means of type illustrations is an important means of making the principles concrete; (2) The historical method should be used, because of its aid in determining the right attitude of mind toward economic questions; (3) The seminar method has its use, in connection with preparation for debates and special investigations or supplementary topics; (4) Economic principles should be

applied to current questions; (5) Graphs are a great aid in economics as well as in commercial geography.

EXERCISES

GROUP ONE

1. Why should economics be offered during the senior year of the high school course?
2. Show how the work in local industries, technique of commerce, commercial geography, and history of commerce may be utilized by the teacher of economics.
3. Name the most important economic topics to be included in the high school course. On what do you base your opinion?
4. What attitude should the teacher take toward questions of controversial economic policy?
5. Should economics be taught inductively or deductively? Explain your answer fully.
6. What is meant by the historical method in economics? Show how you would apply it in teaching free trade *versus* protection.
7. Illustrate how the use of the graphic method helps to make the teaching of economics more real.
8. What place would you assign to extemporaneous and prepared debates on economic topics?

GROUP TWO

1. As the head of a commercial high school, what attitude would you assume toward the discussion of socialism in the economics class room? Justify your stand.
2. Prepare an outline on the *laissez-faire* doctrine, and show how this model outline may be used as a type for other lessons in the course.
3. Criticise the syllabus appended to the present chapter, and suggest modifications which would make it more suitable for your community. Give reasons for any changes you may advocate.

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CHAPTER XIII

BUSINESS ENGLISH

AIM AND SCOPE

THIS course is sometimes given separately and as an adjunct to the business department. There is no reason for this, except in those special schools which have no English department, and which have a more narrow aim than the commercial secondary school. In the ordinary high school, it is inadvisable to make this separation, because, in the first place, it would involve a duplication of work, and in the second place, the subject would be in charge of persons who are not specialists in teaching English. The purpose of the course, as we shall outline it below, is to indicate to the English department the topics that are to be included as a part of its course in order to make it practical; and secondly, to give an outline to such schools as desire to give a specialized course in the subject.

In this connection, it should be remarked that the teaching of the clear and idiomatic use of the mother tongue should not be looked upon as the concern of the English department alone. Just as this department should correlate its work with the other departments by choosing forms and topics that will be of use in the other subjects, so the other departments should make it a part of their aim to maintain the standard of good English, both in oral and written expression. This duty, as we shall see, partly devolves upon such departments as stenography and typewriting.

The aim of the course in Business English is to give the student the ability to use the English language clearly, accurately, and forcibly, both orally and in writing, in connection with all the different phases of business activity. The course, therefore, includes a study of business forms, expressions, and reports. The double aim that we find in the ordinary course in English — ability to appreciate literature and ability to express one's thoughts properly — may be compressed into one, and the teaching of composition in its application to business may sum up the aim of the course in Business English.

The essentials of composition are twofold: first, the possession of ideas to be expressed, and secondly, the knowledge of the best form in which to express them. It is the function of the other departments to give the students ideas upon subjects connected with business. While they do this to broaden the student's mind, by giving him an outline of the activities and the requirements of business, it is the function of the English department to see that those ideas acquired in the other departments will find adequate expression from the standpoint of form. The English teacher in the commercial school must, therefore, see to it that the topics he chooses for composition are such as are within the range of the students' experience. It is especially advisable to confine all composition work to the requirements of business and everyday life, and to omit compositions which deal with mere literary topics. What are, then, the prerequisites of good composition work on the formal side? These are correct spelling and a good vocabulary.

The importance of correct spelling need not be discussed here, because it is so obvious. Even in a high school, we find students misspelling ordinary words. Spelling drill is recom-

mended in the work of this department. The words chosen should be such as are commonly misspelled. The teacher will make a collection of these from the papers of the various students, and devote a few minutes to drilling the class on these words. The teacher of stenography will do the same thing with words that are misspelled in the typewriting transcriptions.

The acquisition of a good vocabulary is a matter of practice, opportunities for which are found in connection with composition work. The student's meagre stock of words can easily be enlarged, especially if the teacher directs the student, with the aid of the dictionary, to introduce variety in his expression. Of course, a method sometimes employed of giving students lists of words with definitions is entirely inadequate and almost useless. Only those words are remembered which confront the pupil in the ordinary course of his work, and which he is therefore compelled to master. There is danger, to be sure, in encouraging the student to enlarge his vocabulary by varying expressions which he is using, owing to the fact that he is apt to get away from simplicity of expression. But this danger is more fancied than real, and will be found only in a few isolated cases.

GRAMMAR AND RHETORIC

The motive in studying grammar and rhetoric in our course is entirely practical. It is not intended to present the subject in its scientific completeness, but only in so far as the subject will be of practical use in composition. There are, indeed, persons who say that grammar is of no practical use in teaching persons how to write correctly, — that imitation is the great source of correctness. There is an element of truth in this, but there is also an element of exaggeration in it. It

is true that we do not usually write with the aid of rules, but if we did not know the rules of good usage, how would we be able to judge of the accuracy of our expression, if we came face to face with a doubtful construction? The most valuable use of grammar, therefore, lies in the fact that it enables us to criticise and improve our own work. Moreover, suppose the teacher tries to correct a wrong form of expression by merely telling the student that he is wrong, without giving him any reason for this fact. What kind of impression will he make upon the student's mind? If we are to make teaching rational, we must base our statements upon a rational foundation, and we do this by means of the study of grammar and rhetoric. The rules of syntax will concern us more than other phases of technical grammar. These rules will be tested and applied in connection with violations of the rules of agreement, government, and order of words in the sentence. The memorizing of formal rules and tables should be avoided.

In connection with the exercises in false syntax, something must be said about the attitude of some teachers toward this kind of work. It is said that students ought not to be deliberately presented with errors of speech for the mere purpose of correcting mistakes. It is true that the most effective work of this sort is in connection with exercises taken from actual mistakes made by the pupils in the course of their composition work. Nevertheless, practice confined to this kind of work is not sufficient, and it is necessary to look for material elsewhere. To confine the exercises to the correction of disjointed sentences is perhaps bad, too. There is abundant material in everyday letters and compositions to supply enough illustrative material for practice. Among topics that should be emphasized in the course are sequence

of tenses, proper use of the infinitive and participle, and the position of adjective and adverbial modifiers in the sentence.

As for rhetoric, it is necessary to make this study more practical than is usually done. The theoretical discussion of good usage and the principles of sentence and paragraph structure is not enough, because such a theoretical discussion is not sufficiently related to the demands of practical work. Consequently, it has been maintained, and with very good reason, that the practical study of the sentence and paragraph should precede the study of words, — a procedure which reverses that of the ordinary rhetoric, which begins with words, then takes sentences and paragraphs, and finishes with the composition. Among the qualities of style, we shall have to emphasize practically the qualities of clearness, correctness, and unity. These are the essentials of good style. Qualities of force and elegance, while important, belong rather to the luxuries of style, and are more valuable for the student who is training for authorship than for the student who is merely training for business life. It must be admitted, however, that authorship is finding its place even in business. Some of our enterprising advertising concerns have been introducing advertising literature of high literary quality — literature that is almost entitled to the name.

The study of grammar and rhetoric, to sum up, then, will be conducted entirely in the interests of good writing, and not as a study for its own sake. We must, therefore, consider some of the forms which practical training in composition and language work will take.

FORMS OF COMPOSITION AND LANGUAGE WORK

(A) *Transcription.* This form may hardly be put under the heading of composition work. It has its place, however,

to a limited extent, in calling the attention of the pupil to conventional forms of business papers, to arrangements of the parts of a document, such as the formal parts of a letter, and to characteristic business phrases. One form of transcription that has its place, however, is copying from rough draft. The typewritten transcription of stenographic notes is one form of practice in this line, but even the rapid dictation of business forms in longhand gives the desired practice to the student in the proper placing of his copy on the paper.

(B) Language Drill Work as an Aid in Composition. This drill work may be conducted in connection with the actual composition lesson or apart from it with materials chosen personally from the composition work of the student. Some of the forms for this drill work will take the following shape:

(1) Changing grammatical forms of noun or verb; for example, changing the singular into a plural, a present into a past, and all the other corresponding changes in the sentence which are made necessary by the change of one form.

(2) Supplying missing words. This is a good drill for students, especially where two or three alternative expressions are given to him and he must decide which one of the three fits appropriately in the vacant place in the sentence.

(3) Substituting synonyms and synonymous words for those used. This is a valuable method for enlarging the student's vocabulary. A valuable aid in this direction, one that authors appreciate very highly, is a book like Roget's *Thesaurus*, which gives not only synonyms, but related expressions on the subject.

(4) Condensation. The art of condensation is very important to the business man, because it means, in many cases, the saving of money and time. The ability to condense an important thought into few words, without making it difficult

for the reader to grasp it, is a very valuable one, particularly to the writer of advertisements. Thus persons who are not skilled in condensation find it difficult to compress their thoughts into few words without omitting essential elements, and even if they are successful in crowding everything into a brief space, they make the thought obscure. Some of the more modest forms of condensation upon which the student can try his skill, as a preparation for the more important work, are:

a. Combining several simple sentences into compound or complex sentences, and compressing clauses into phrases or even into single words.

b. Making abstracts or summaries of paragraphs, chapters, and stories, and summarizing a thought of a whole story into one or two sentences. The condensation of a circular into a small advertisement, or the condensation of a letter into a single telegram, is the most valuable practical application of the art of condensation.

(5) Amplification. This art is necessary, as well as the art of condensation. Its practical value arises in the expansion of a topic into a paragraph and an outline into a composition. The true art of amplification consists in the ability to expand the thought in such a way as to make each sentence bear upon the logical development of the thought, and as to constitute a connected whole, which has unity. The business man has occasion to make use of this art when he is compelled to develop a whole composition out of a few disjointed or fragmentary hints given to him. The practical use of the art of amplification is found in the class room in connection with writing compositions from outlines. Almost every assignment of a task in composition work is an exercise in amplification.

(C) **Reproduction.** Composition work may be divided into two classes: reproduction and invention. The former is based upon imitation and the latter upon original effort. In a large sense, the element of originality is found even in reproduction, just as the element of imitation is found in invention. By reproduction, we mean the imitation of a model composition by reproducing it either in substance, or producing a composition along similar lines. In business, there are certain standardized forms of expression, — typical methods of developing certain topics, — that must be mastered by the student before he can be allowed free scope to exercise originality. A student who disregards business forms and expressions and uses those which suit his taste best, is almost as bad as the lawyer who tries to disregard precedent. The study of model business letters, reports, and advertisements is, therefore, of the highest value. A critical analysis of models has many values: (1) It gives the student an idea and an incentive for imitation.

(2) It allows him to see in its complete state the thing which he is planning to do.

(3) It gives him a knowledge as to the proper order of procedure in order to develop a certain thought.

(4) It increases his vocabulary by bringing him in contact with speech that is better and fuller than his own.

(5) It adds to his stock of ideas.

(6) It gives him an acquaintance, that is indispensable, with conventional formal phrases and usage in business.

There are, of course, certain dangers that are connected with the use of models; as, for example, the use of a model that is beyond the level of the pupil's intelligence or experience. This fault will be avoided if the composition work is thoroughly correlated with the other work of the students. A

second danger in the use of models is in the effect it may have upon checking the spontaneity of the student's expression. In the early stages of development, this danger is negligible, and if care is taken to have the student write upon lines parallel with the model instead of identical with it, this danger will be avoided.

In regard to the proper use of the model, it is sometimes said that it should be introduced only after the student feels the need for such a model. For example, if the student is asked to write a composition on a certain topic without any other aid, and his effort is compared with the model which is introduced then, an appreciation of the value of the model will be very much keener than it would be if the model were introduced at the very start. There is something to be said in favor of this. The only difficulty is that some students will exert no effort whatever, unless they have some hint of procedure at the very start, and this they get when the model is presented to them.

(D) Invention. The work in original composition is built upon the foundation laid by reproduction. In a sense, there is no such thing as absolutely original effort in composition, especially in business composition. While the student will be writing original letters, reports, circulars, and advertisements in connection with the needs of his work, nevertheless, he will be making use extensively of phrases and forms borrowed to a large extent from the models which he has studied.

Aids in Composition. *The Outline.* — In the presentation of topics for composition, the question arises as to the extent to which the teacher is to aid in the development of the topic. This leads us to the consideration of the outline. The value of an outline in any composition consists of the fact that it

gives the pupil a plan of his work and thus frees him largely from the necessity of planning and executing it at the same time. It is therefore of psychological value, as it gives the pupil only one thing to do at a time, makes the sequence of his thought logical, and gives him confidence. The objections to the use of the outline are that it weakens the power of originality and sustained thought by guiding pupils along a certain groove; that it makes the composition seem stilted and lacking in spontaneity, and that it checks variety of expression by making the sentences appear as answers to questions. These are objections that are all true, if the outline is not properly used. They may be obviated in the following ways:

(1) The outline may be developed from the model by questioning the pupils and letting them suggest the sequence of the topics, or by questioning the pupils without the model, by asking them what sequence they would naturally expect. Thus the outline will develop as a result of coöperation of the teacher and the class; and it will not check spontaneity but rather reënforce it.

(2) If the outline is not excessive in detail, and if it is in the form of headings rather than interrogative sentences, freedom of expression will be preserved.

(3) Variety of expression can be secured by a preliminary oral discussion of the topics in the outline, in which different pupils are asked to give their amplification of the topic. This is one of the valuable features of the outline, in that it allows opportunity for oral composition which in almost all cases should precede the written composition.

(4) In advanced classes, occasional compositions should be written without the aid of any formal outline, but even in these compositions, the pupil should make his own outline preliminary to writing the composition in detail.

(5) The writing of skeleton compositions by pupils is good logical training. It is an essential preliminary to the writing of any long composition. The brief is a good example of such a skeleton composition.

LETTER-WRITING

This is such an important phase of composition work for the business student that we give a little more extended treatment to it.

The formal parts of a letter, and the spacing, spelling, and punctuation of these formal parts, are of such great importance that special attention should be given to them. The business man is apt to disregard or depreciate any letter of application that comes to him, no matter how meritorious, if it lacks perfect accuracy in those parts. But in teaching pupils accuracy in the formal parts of a letter, it may be advisable to give them practice in writing skeleton letters. By these we mean letters in which the body is left out entirely, but in which the formal parts are in their correct position. In the teaching of the business letter the student should be taught how to analyze the model and use the outline, which gives the sequence of development of topics. At first the letters may be analyzed by the teacher in coöperation with the class; and afterwards by the class, without the assistance of the teacher. The aim should be to train the pupils to know the topics that should be included in a business letter upon a particular subject, and the sequence in which those topics should be developed.

In the earlier stages of the course in letter-writing, where oral composition is a necessary preliminary to the writing of the letter, the outline forms an ideal basis for oral discussion, especially so in training the pupils in variety of expression.

One pupil will give his form of introduction, another pupil will vary it, and thus good training in variety of expression will be furnished; for while there are certain stereotyped expressions in business letters, there is still enough opportunity for variety and originality. In the advanced work, the pupils should make their own outline. It may be advisable to let the advanced students make mental outlines of letters, so as to give them training in writing good letters on first draft, without the necessity of recasting or rewriting the whole letter.

The following is an illustration of the kind of outline referred to in the preceding paragraph, using, as an illustration, a letter of application for a position.

1. How applicant learned of the vacancy.
2. Qualifications, education, and profession, including age, experience, place of present and past employment.
3. References as to character and ability.
4. Salary requested and statement as to prospects of advancement.
5. Applicant's request for an opportunity for a personal interview.

Classification of Letters and Order in which Letters are to be Introduced. — The development of the course in letter-writing should be from the simple to the complex. Those letters which deal with a single topic should come first. The classification that follows is, therefore, upon the basis of the order of introduction of the letter in the course, and is based not only upon consideration of the development from the easy to the more difficult, but upon consideration of the needs of the student.

1. Letter ordering goods.
2. Letter of inquiry.

3. Letter of acknowledgment (receipt).
4. Letter asking for remittance of bill due.
5. Letter of application for a position.
6. Letter of recommendation.
7. Letter of complaint.
8. Letter of introduction.
9. Circular letter making an announcement, or offering something for sale.

In this connection it must be remembered that the course in letter-writing may follow an order slightly differing from the above, a kind of spiral form ; that is, some of the earlier forms of letters will be written a second time but with more complex factors in them. For example, a letter asking for a remittance of a bill may be very simple in its nature, but when it is connected with the topic of dunning letters, it involves a number of complex considerations, together with a discussion of business ethics. It therefore belongs more properly to the advanced parts of the work. Similarly, the letters of recommendation may give rise to a series of such letters as, for example, a confidential inquiry as to the character of an applicant on the part of the new employer, and the reply of the latter. Here a good question of business ethics and even of law arises. These questions point to the fact that the course in business correspondence cannot be isolated from the rest of the business course ; that it involves the treatment of business practice, etiquette, and law ; and that the correlation of the course in business correspondence with the other topics will make it more vital and an integral part of the real business course.

WRITING OF REPORTS AND ADVERTISEMENTS

The need for reports, both oral and written, as a necessary part of business training is perfectly evident. Technical

reports in the form of financial statements are, of course, not connected with the English course, but the clear analysis and application of a report in language is clearly a matter of English. Since it is better not to isolate the substance of the technical report from its language, the matter of clearness of expression and logical sequence of such a report may be left to the accounting department. But the study of reports, of succinct statements of happenings, of the presentation of needs for the coming year, of the statement of work accomplished, of the forecast of future conditions, — most of these matters in their more elementary forms, — may be conveniently taken up in the last year of the secondary school course. The successful making of a report depends upon the study of good models. For this reason, the study of trade journals and trade reports will be of very great help. Model reports on simple occurrences of facts may be found in the daily papers. In fact, the newspaper reporter is the specialist in making reports. The study, therefore, of newspaper articles, the reproduction of these, and the writing of independent news reports on items connected with happenings in the school — this kind of work is a valuable training in the writing of trade reports. We saw, in another chapter, the trade journals and magazines which we consider it advisable for the teacher in secondary schools to possess. The specialization along definite lines, however, is out of place in the secondary school, and must be reserved for the university.

The ability to write advertisements is a valuable accomplishment, because of the necessity which every business man now and then is confronted with in the way of writing of routine advertisements. The more elaborate form of advertising has to be left to a special course, because it involves special training, but the simpler forms of advertisement writing

should be taught to the student in the English course. The principles of advertising, which are discussed to some extent in the course on the Technique of Commerce, may be reviewed in the English course. The writing of illustrated advertisements or cards, so common in our street-cars, is a matter that is outside of the scope of the English department. The department of drawing will occupy itself with the artistic phase of the work, and will also incidentally discuss the descriptive matter that should accompany the illustration, the most effective condensation of such descriptive matter, and the most suitable placing of it on the card.

CORRECTION OF COMPOSITION WORK

The leading principle which should govern us in correcting compositions of students is that mistakes corrected by pupils themselves are more effectively brought home to them than if they were corrected by the teacher. Hence, pupils should be taught how to correct their own compositions, because in this way a greater exercise of self-activity on their part will be called for, the critical power of the pupil will be developed, and habits of care and improvements of standards will result.

Two extremes are to be avoided in the correction of compositions.

1. Telling pupils how to correct their own compositions without giving them any other aid, and
2. Correcting the compositions for them.

Pupils should be given some cue which will suggest to them where the error is. This may be of various forms:

1. By pointing out the error to them without telling the correction;
2. By letting them find their own error by localizing it, that is, by telling them approximately where it is contained;

3. By asking them questions which will direct them to the erroneously constructed word or sentence, and which by comparison will lead them to see their own error. If the teacher himself makes the correction, as in a complicated construction, the pupil should be asked to give the reason.

In the correction of compositions in the course in Business English purist standards should, to a certain extent, be kept in view. The reason for this is that there is a marked increase of carelessness in usage on the part of the business man. Students will use a loose construction or an abbreviated sentence, and defend themselves on the ground that they have seen business men use such a form. The only way to counteract such a growing laxity is to insist upon a reasonably rigid standard. Of course, to create censoriousness has a bad effect in checking the spontaneity and imagination of the pupils, but this will follow only if the writing and the criticism of the work occur in the same lesson. The correction of a composition should be in a lesson separate from the writing of it, because then the pupil will not be self-conscious in the production of his work, and will approach the task of correction with a fresh mind. If he tries to correct the errors while his mind is still on the topic which he is writing, many errors will escape him.

Since it is our purpose to teach pupils how to correct their own compositions, we must let them do so under proper direction. The critical power is best aroused if the mind is focused on one difficulty, hence the advantage of reading the whole composition for one type of error at a time. For example, the whole composition will be read,

1. For spelling, capitalization, and punctuation.
2. For simple grammatical mistakes, such as agreement of subject and predicate.

3. For the larger aspects of construction.
4. For deciding whether pupils have followed up their outline.
5. For seeing whether the paragraphing is correct.
6. For improving sentence structure by changing from compound to complex sentences, etc.

An additional means of developing critical power is to give pupils occasional opportunity to correct their neighbors' compositions, because one sees his own fault in his neighbor quicker than in himself. Pupils should indicate the supposed fault of the neighbors in the margin, and a system of proof-readers' marks should be used for this purpose. Proof-reading is one of the forms of correction which should be cultivated. The business man has constant opportunity to read printers' proofs, and he ought therefore to be trained in methods of reading proof, and in the proper way of indicating and interpreting proof-readers' marks.

SUMMARY

The course in Business English should be given by the English department, and not by the commercial department. The aim of the course is to give the student the ability to use English clearly, accurately, and forcibly, both orally and in writing; and the teaching of composition in its application to business is the central aim of the course.

Correct spelling and a good vocabulary are the formal prerequisites of composition. Grammar and rhetoric, both studied practically, are of value because they give the student correct standards and because they sharpen his critical faculties.

Among the forms of composition and language work are:
(a) transcription; (b) language drill work in changing gram-

matical forms, supplying missing words, practical use of synonyms, condensation and amplification; (c) reproduction of model forms; (d) writing of original compositions. The model and the outline are valuable aids in composition work. Uses and limitations of both are mentioned in the text. Letter-writing is the most practical form of composition work. The formal parts of the letter should receive special attention. To obtain the best results, students should analyze model letters, and make outlines to aid them in writing their own letters. The development of the course in letter-writing should be from the simple to the complex.

The writing of ordinary reports and advertisements belongs to the English course. Technical reports belong more appropriately to the department with which they are connected.

The leading principle which should govern us in correction of compositions is that pupils ought to be taught how to correct their own work.

EXERCISES

GROUP ONE

1. Why should Business English be offered by the English department rather than by the commercial department?
2. How does Business English differ from the ordinary work in English?
3. What is the place of grammar and rhetoric in the English course of the commercial high school?
4. Explain the importance of writing reports and summaries as a part of the training of commercial pupils.
5. What is the function of the outline in composition work?
6. How should spelling be taught in the commercial high school?
7. Outline a lesson on answering an advertisement for a position as bookkeeper and stenographer.

GROUP TWO

1. Plan a series of lectures on business topics so as to help teachers of English in a commercial high school.

2. Outline instructions to the English teachers of a business high school, which will guide them in (a) the emphasis on business topics for composition work, and (b) the selection of articles having a commercial value for purposes of making abstracts.

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¹ References to text-books in grammar, rhetoric, and composition are omitted.

CHAPTER XIV

STENOGRAPHY AND TYPEWRITING

STENOGRAPHY

WE should have been inclined to omit the treatment of this subject in this work, because it is a large subject that deserves a separate treatise. But as many teachers of commercial subjects find themselves under the necessity of including the teaching of stenography as a part of their work, it is advisable to include a brief account of certain pedagogic phases of this subject.

Educational Value. (*A*) *Practical Value.* — This phase of the subject was discussed in the first chapter. It will only be necessary, therefore, to summarize certain points here.

(1) Its utility as a time saver to the executive, who can use the time thus saved in solving the larger problems that arise in a business.

(2) Its value as an aid to clerical efficiency by increasing many times the amount of work turned out.

(3) Its value in preserving accurately, certain records, such as those of trials, of speeches, and of literary effort.

The power which the subject requires and which the teacher should cultivate in connection with the teaching of the subject should also be considered here, because a regard for this phase of the subject will influence methods of teaching to a great extent.

(*B*) *Disciplinary.* — (1) The development of the power of concentration. This is a very essential prerequisite for all good

work. Attentiveness and alertness can only be developed by eliminating as far as possible all distracting elements in the early stages of teaching. It is very true that in an office the dictation which the stenographer receives is given under conditions which are anything but favorable to concentration, but if the habit of concentration has been formed in the apprenticeship period, the power to disregard those distracting elements will be developed.

(2) Control of the mind over the muscles and responsiveness of the hand to the command of the brain. This can be developed only by practice. Accuracy and speed are matters of habit, and the principles to be observed in habit formation as they have been discussed in Chapter III will have to be taken into consideration in such development.

(3) The development of habits of accuracy and neatness, especially in connection with typewriting, is again a matter of practice. Any overlooking of faults, failure to "prevent exceptions," will result in destroying the fruits of previous training.

(4) The development of the sense of responsibility. The sense of responsibility cannot be cultivated by mere theorizing about it or lecturing to the students about it, although a lecture as a supplement to training is a valuable thing. The opportunities for training in responsibility exist in every subject in the curriculum. What special opportunities does this subject offer in training pupils to a sense of self-reliance? We find a common complaint in the business world that stenographers are not properly trained, that they lack initiative, that their work is merely mechanical. It is possible to arrange the work in a school in such a way as to give an opportunity for the exercise of initiative. A course which confines itself to mere dictation and mechanical reproduction is not sufficient in itself

for the purpose of developing self-reliance. There are opportunities for the teacher to dictate an outline in stenography and then require the student to transcribe the outline in narrative form. Another opportunity for initiative is to allow students to dictate letters of their own composition to other pupils; and still another to ask the student to write letters of their own composition, merely assigning to them the topic with which the letter is to deal. Thus, it ought not to be necessary in an office for the executive to be compelled to dictate routine letters to the stenographer. This training, therefore, is valuable in teaching the pupil how to take care of these routine matters upon his own initiative, when he enters business.

Quickness of judgment to a very high degree is required of the stenographer. Outlines or abbreviations have to be taught, that will express a certain idea in the shortest way, and still be legible; and this has to be done instantly. This training is again a matter of habit formation. The more common difficulties are relegated to the automatism of habit, and the unusual problems which come up in the course of dictation are therefore taken care of by the mind with very little difficulty.

(5) Development of imagination and judgment. The stenographer needs this power particularly in the reading of shorthand notes. The context must be reproduced from notes, in which the omission of vowels and the use of contractions leave something to the imagination. Memory cannot always be relied upon to help in this case. If the stenographer has not sufficient culture, his imagination will have no scope for activity, and he will be hampered in reproducing the notes which are outside of the regular business routine. The deficiency in the preliminary education of a stenographer

is, of course, beyond the remedy of the special teacher. The judgment is exercised in the quickness of decision which the stenographer must make in the writing of outlines, so that these are correct applications of principle, well constructed and legible. In the choosing of phrases best suited to the kind of dictation, good judgment is also required.

(C) *Value in Correlation with Other Subjects.* — (1) It helps a student in his English, because the transcription must be accurate, both in spelling and grammar. It is the duty of the shorthand teacher to consider the correction of bad English within his province. No subject teacher has any right to shift responsibility for mistakes in English upon another department, and this is particularly true of the teacher in stenography. Where such teacher finds that the mistakes are very prevalent, it is his duty to confer with the teacher of English, to see in what way the fault can be remedied. Occasional spelling drills given by the teacher in stenography will not take much time and will be very useful. The teacher will, of course, select words which are commonly used in business. It may also be well, occasionally, to consider common errors of speech without regard to the fact that such subjects are taken up in another department.

(2) As the usual systems of shorthand are phonetic, it might be thought, theoretically, that phonography would interfere with the spelling of the pupils. But practical experience has shown that this is not so. The transcription of the notes on the typewriter necessitates correct spelling, and therefore acts as an antidote to any possibility of phonetic spelling in longhand. It may be said, incidentally, that phonetic written spelling of a word, in order to emphasize the phonetic nature of the usual systems of shorthand, is to be condemned precisely because it will interfere with the visual impression

of the word, and therefore hinder the pupil's correct spelling. On the other hand, oral phonetic spelling, in order to emphasize the fact that silent letters are not written in shorthand, is of great value, and has none of the disadvantages that written phonetic longhand spelling has.

(3) Stenography gives the pupil a practical knowledge of business routine and business forms. The course in office practice ought to be connected with the department of stenography and typewriting. Since stenography will principally be used in commercial work, it is, of course, very desirable that the bulk of dictation shall be in the form of business letters. On the other hand, there are other forms of stenographic work which the student will have to perform in business, such as the filling out of forms, the writing of legal papers, the making of reports, etc. Practice in this form of dictation should therefore be given to the student. Correlation of the dictation work with business routine will have the incidental advantage that in practising for the sake of technical proficiency the student will at the same time learn a great deal about business procedure.

(4) Stenography trains the pupil's ear by emphasizing the correct pronunciation and the correct accent of words. It consequently improves his pronunciation. We are apt to take for granted that the student knows how to pronounce correctly the words he is going to write, and that he has the proper conception of sound values. With this idea in view, we begin our course by plunging right into the intricacies of technical shorthand. This is a mistake. One or two introductory lessons should be devoted to ear training, and at the beginning of each lesson, in the early stages of the work, a little time devoted to a pronunciation drill will be profitable.

Aims of the Teacher. — In the narrow or technical sense, these aims may be briefly stated as follows :

(1) To impart correct principles of the system taught.

(2) To enable the student to apply these in writing shorthand legibly and rapidly. In giving our illustration in connection with methods, we shall have reference to the Pitmanic systems. We do so merely for the sake of convenience, and not because we are pronouncing an opinion on the advantages of one system over another. However, this point is immaterial, because the principles of teaching to be discussed are the same, no matter what the system is.

Teaching Methods. — The general principles which will govern the teacher in his methods, we must repeat, are the principles of self-activity and habit formation. Specifically, we may illustrate some of the points in connection with correct method, by pointing out some of the faults which are found in connection with the teaching of stenography.

(A) *Faults of Method.* — (1) The principles are all taught before any attempt is made to give dictation. This is a violation of all sound principles of teaching. It is like trying to make a mechanic by means of a series of lectures on a trade without giving him any practice. It is impossible for the student to digest the principles that are thrown at him in a great heap. It is all very well to say that the principles of stenography are clear, but the aim in teaching shorthand is not so much to give the student an intelligent knowledge of the principles, but to give him the ability to use them efficiently. This is a matter of practice. Each rule taught should be drilled upon until a knowledge of it is second nature with the student. Our best text-books to-day begin with dictation almost in the very first lesson. The advantage of this method is twofold. First, it gives a chance to the pupil to digest the principles by drilling

upon their use; secondly, it gives him the interest in the subject by making him realize that he is writing shorthand at the very start.

(2) Some teachers who avoid the fault of postponing dictation to the very end still make the mistake of including too many rules and exceptions in the same lesson. The correct principle is that one rule at a time should be presented and drilled on before another one is given. Thus, it may be well to present the rule without any exceptions, drill on it, and then introduce exceptions.

(3) An almost universal fault is that of introducing a principle without making the student see the reason of the necessity for it. This point was mentioned in Chapter III in connection with purpose or motivation in teaching. The inventor of shorthand had many reasons for adopting certain devices. How much more enlightening it is to the student to be put in the attitude of the mind of the inventor of shorthand, who felt impelled by certain reasons to adopt a certain device, than to have the device thrown at him as a mere fiat!

While the method of induction, as we have seen, is not, in its strict form, applicable to the teaching of shorthand, a certain modified form of it which embodies the principle of going from the illustration to the rule has its place in stenography. We may illustrate this by a lesson on the *s* circle in the Pitmanic systems.

(a) A number of words containing *s* are dictated; pupils write them, using the long *s*, because they know no other.

(b) Their attention is called to the frequent occurrence of *s* in the language. This leads them to consider how much time could be saved by a shorter form for *s*.

(c) The students having realized this necessity, the circle is now introduced by the teacher and some of the outlines

written before in the long form are written on the board by the teacher in the shorter form.

(d) The students write these outlines, together with others of the same kind, from dictation.

(e) The difficulties of using the circle in words beginning with a vowel followed by an *s* are shown, and the first exception to the use of the *c* circle is therefore noted. At this point the teacher dictates matter containing words in which the *c* circle may be used and those in which the *s* circle is not permissible.

(f) The last step involves the dictation of a connected passage in which there are not only words embodying the principle taught, but words embodying principles previously studied.

(4) In the dictation of the connected passage, the teacher is apt to sacrifice good English for the sake of giving many applications of the principle. This is one of the most characteristic faults of the shorthand text. The passages are in bad and meaningless English. We may state as a general rule, that passages dictated should always be in good English, and preferably should deal with business. This advice should be followed, even though in doing so opportunities for drilling on the principle are lost. If any extensive drilling is to be done on the principle, the isolated word should be used as the medium. Dictation of nonsensical connected passages has no advantages over dictation of isolated words, and, on the other hand, involves serious disadvantages of its own.

(5) The dictation of lists of words has its place in connection with a drill upon a new principle, but it is possible to overdo work of this sort. The bulk of the class work should be on dictation of connected matter. Where there are words embodying particular difficulties, they may be discussed in ad-

vance of the dictation. Some teachers prefer to discuss the difficulties in words after the dictation of the passages, but we believe that, for purposes of cultivating speed and self-reliance, it is more advisable to discuss the hard outlines expected, in advance, so as to smooth over the difficulties, and to give the student confidence. It is very easy for one unexpected difficulty to throw the student off the track and make him lose more than a sentence, and this danger should be avoided.

(6) In connection with principles of habit formation, we saw that bad habits formed early are hard to eradicate. Any attempt of the teacher to force the student's speed has a disastrous effect upon legibility. Poorly written, inaccurate, and illegible outlines result from the attempt of the teacher to develop speed before the ability to make good and accurate outlines has been developed.

(7) In connection with self-activity, we saw how important the principle of "learn to do by doing" is. A teacher who lectures on a shorthand outline, or who lets one pupil write on the board while the others are merely watching, is not obtaining the maximum amount of self-activity on the part of the class. The pupils in the seats should write the outlines simultaneously with those at the board. It is a useful thing when dictating to have three or four pupils write their notes on the board, while the others write theirs at the seat. The danger that pupils will copy from those at the board is entirely negligible.

Suggestions on Method. — (1) We saw, in connection with the correlation of stenography with English, that the student should be brought to a realization of the phonetic nature of stenographic writing. We saw also that a preliminary drill in sound analysis of words should be given. The purpose of this drill should be to note the absence in the pronunciation

of the silent letters, and to determine the accent of the words. It is surprising to find how many pupils there are without any conception of accent ; or pupils, who, while accenting correctly, are unaware of the syllable upon which they put the stress. We may repeat what we said before, that in the early stages of the subject a pronunciation drill should precede every lesson.

(2) As dictation of connected matter is so important from the very start, it is necessary to introduce the most common word-signs and phrases in the beginning. The old books used to introduce the contractions and phrases in a mass, and thus throw an extra burden upon the memory of the student. The word-signs and phrases should be introduced gradually as the lessons progress.

(3) An important question which has split teachers of shorthand into two camps is the question whether any deviation from the standard outlines, as found in the authorized dictionary, should be allowed. There is something to be said in favor of each side. In phraseography, for example, there cannot be any such thing as an accepted form or an unauthorized form. Each stenographer will have to adapt the principles of phraseography to the purposes of the particular line of business which he is reporting. To be able to do so, he will have to learn on what principles phraseography is based, and what element in the phrase contributes the main part of the outline. Writers of shorthand texts should limit the number of phrases and contractions to those most uniformly employed, and allow no deviation from these. At the same time they should teach pupils what principles they are to employ in building up phrases of their own. The objection, that if students modify their outlines to suit themselves, other persons will not be able to read their outlines, is of very little

importance. There is only one way in which a shorthand system can be of universal legibility, and that is by the use of a stenotype. This machine is as yet in an experimental stage, and it is too early to tell whether it has any advantages over the ordinary system.

(4) Our text-books in stenography sometimes lay great stress upon mnemonic devices for remembering positions of vowels, hooks, etc. These should be used very sparingly. If the mnemonic sentence makes no sense and is a mere nonsensical combination of words, it should not be used, because it will only entail additional effort in remembering the sentence as well as the key to it. A sentence such as the following, "That pen is not much good," has its uses as an aid in remembering the position of the vowels, and in thus tiding the pupil over his initial difficulties.

Common Faults of Students, and How to correct Them.—The consideration of the common faults of students will throw light upon many of the problems of method.

(1) Writing words as they are spelled. The remedy for this is pronunciation drill as mentioned above.

(2) Writing in wrong position. The remedy is to make the student pronounce the word aloud and note the accented vowel. It is useless for the teacher to tell the student that his position is wrong, without letting him discover his own mistake. Thus, if the pupil does not realize that he has picked out the wrong vowel for his accent, the teacher will call his attention to the fact by pronouncing the word himself, and exaggerating the stress upon the accented syllable. In this way, the worst ear in the world will have its attention called to the syllable which has the stress.

(3) Writing outlines that are not neat, — too large, for example. The remedy is insistence upon neatness from the

very start. It is because the teacher has failed to emphasize this at the beginning and has allowed exceptions to creep in that these faults have developed. When this is the case, the teacher must lead the student towards correcting this fault.

(4) Inability of the student to read his notes. This is due to forcing the speed of the student, and not giving him an opportunity to read his notes. The remedy is to let the writing of shorthand and the reading of notes go hand in hand from the very start. The reading of engraved shorthand is of importance in giving the additional drill necessary for the reading of notes.

(5) The other faults of students are faults which are found in other subjects as well. They arise from lack of judgment, from misapplication of principles, which shows itself in the use of a wrong outline. The remedy depends entirely upon the nature of the mistake. In general, it may be said that it is better to lead the student to see his own error by questioning him, than to tell him his mistake outright. Thus, if the pupil makes a wrong outline, the teacher should not forthwith correct it, but call his attention to the wrong form, and by questioning him, lead him to realize that the form is wrong and what the correct form is. This method of questioning is known as Socratic questioning, and is one of the most powerful means known to the teacher for the correction of mistakes.

TYPEWRITING

In this subject the principles of habit formation are still more important than in stenography. There are two extremes to be avoided, however. One is, putting the student at the machine and letting him work out his own fate. This is ruinous, because it results in the formation of bad habits. Teachers realize that typewriting is a subject to be taught,

not merely to be picked up. On the other hand, the opposite policy of doing all the drill work during the regular class periods is a great waste of time. After the initial stages in the formation of good habits have been passed, most of the drill work should be done after school hours. There are practical difficulties connected with this, because of the fact that students have no machines on which to practise at home, thus necessitating a large equipment in school, in order to provide a large proportion of the pupils with individual typewriters to practise on. Were it not for this fact, it would be advisable to have typewriting introduced into our course of study at the same time as stenography.

The time is not very far distant when the typewriting companies will be able to reduce the rental of machines to such a rate as to enable each pupil to take a machine home, as he takes a text-book home now.

In connection with the habits which, at the very start, we want to develop in the student of typewriting, is the habit of taking care of his machine and keeping it in good order, right posture, the use of all the fingers, and the habits of accuracy and neatness. Little need be said about the value of every one of these habits. Some remarks may be of value in connection with several of the habits. With regard to the use of all the fingers, the experience of all teachers is that one who becomes accustomed to use two or four fingers, for example, will find it very difficult to break this habit. The result will be a hard touch and a retardation of speed. It is therefore important, in connection with posture, to see to it that the pupil has his hands over the keyboard instead of away from it. The fact that the system of touch typewriting encourages this proper touch, is one of the many reasons why it should be adopted in all schools.

The habit of accuracy must be developed at the very start, by rejecting any work that shows any errors, and compelling the student to rewrite it. The same rule would apply to neatness. Any copy that shows erasures or finger marks or is improperly spaced should be rejected. It is true that in practical business we are not so severe in the matter of erasures. But it must be remembered that if we want to check the habit of carelessness, we must prevent its development at its incipency, and this can be accomplished only by rejecting work that is not reasonably perfect.

Suggestion on Method. (1) *Mechanism of the Machine.* — Every student should be taught some facts about the mechanism of the machine, so as to know how to take better care of it, and how to make emergency repairs, or the adjustments necessary, when a machine gets slightly out of order. Inability of the student to attend to some trifling disarrangement of the machine results in tying up the work until a mechanic can be sent for. This causes both inconvenience and loss of time.

(2) *Touch Typewriting.* — Reference to touch typewriting has already been made above. This method was developed in the education of the blind; and it soon became evident that it was generally applicable to all persons. The next step was the realization that it was not only a method available to all, but that it was far superior to the other method in speed and touch. The technical methods in touch typewriting have been extremely well developed by the manuals on the subject, and it is unnecessary to discuss them here. One remark, however, must be made, and that is, if the teacher adopts the touch system, he should not compromise by allowing the visible method to be used as well. The first should be used exclusively.

(3) The subject of spacing and forms is of extreme importance. Consequently, considerable practice should be given to the student in typewriting legal forms and in filling out blanks.

(4) The stenographer and typist has almost exclusive charge of the mechanical side of the incoming and outgoing mail. Filing and indexing — work which was considered in connection with office practice — should therefore be an essential in this course. In fact, it is difficult to separate the course in typewriting from that in office practice. Although it is possible to have office practice without typewriting, it is inadvisable to have typewriting without office practice in close correlation with it.

(5) Duplicating work should also be taught to the student: not only the making of carbon copies, but also the cutting of stencils for the mimeograph.

While we have spoken of the necessity of having absolutely accurate work, yet times will always arise when it is necessary to make corrections and inserts. For this reason the student should be taught how to attend to such matters.

SUMMARY

The practical educational value of stenography lies in its utility as a time saver to the executive, as an aid to clerical efficiency, and as a means of preserving certain records. The disciplinary value lies in its development of concentration, control of the hand, development of habits of accuracy and neatness, development of the sense of responsibility, development of the imagination and the judgment.

The educational value of stenography in correlation with other subjects lies in its aid to correct English, in giving pupils correct values of English sounds and improving their pronunciation, and in giving them valuable office practice.

Faults to be avoided in teaching stenography are: (1) The teaching of all the principles before any attempt is made to give dictation. (2) Including too many rules and exceptions in the same lesson. (3) Introducing a principle without making the student see the reason for it. (In this connection the sequence of steps in a lesson is given.) (4) Sacrificing good English for the sake of giving many applications of principle. (5) Dictating words instead of passages. (6) Forcing speed at the expense of accuracy. (7) Failure to give sufficient practice to all students. Methods of overcoming the faults are indicated.

Other suggestions on method are: The giving of frequent pronunciation drill; the introduction of common word-signs and phrases in the beginning, so as to make dictation possible at the very start; the teaching of the general principles of phrase construction; and the sparing use of mnemonic devices.

Common faults of students are: Writing words as they are spelled; writing in wrong position; lack of neatness; inability to read their notes; the misapplication of principle. The remedies are indicated in connection with each fault.

The principles of habit formation are of still greater application in typewriting than in stenography. The development of good posture, neatness of work, proper technique, and habit of accuracy are extremely important. The use of touch typewriting is recommended. Among the phases of work that the student must get in this course are proper spacing and technical forms, carbon work, stencil and mimeograph work, addressing, filing, and indexing.

EXERCISES

GROUP ONE

1. What is the practical value of stenography and typewriting?
2. Briefly explain the disciplinary value of stenography.
3. Define the place of stenography in the commercial programme.
4. Should the school limit itself to a single system of shorthand?

Discuss *pro* and *con*.

5. State the advantages of the touch system of typewriting compared with other systems.

6. Should the teacher of stenography insist upon an absolute adherence to the dictionary outline, or should he encourage rational deviation therefrom?

GROUP TWO

1. As the principal of a newly organized commercial high school, how would you decide:

- (a) Upon the system of stenography to introduce?
- (b) Upon the kind of typewriting machines to purchase?

2. Plan a system of practical training for your pupils of stenography and typewriting, utilizing the facilities afforded by the school alone.

3. Outline a model lesson in stenography, suitable as a type to be followed by young teachers.

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PART THREE

SPECIAL PROBLEMS IN COMMERCIAL EDUCATION

CHAPTER XV

THE PREPARATION AND EQUIPMENT OF THE COMMERCIAL TEACHER

THE SITUATION

COMMERCIAL education, especially in the higher forms, has made wonderful advances during the past decade. All the signs of the time point to even greater forward strides. In order to meet the demand for this kind of instruction, it is essential that there be supplied a sufficiently large number of well-trained teachers. The fact that universities throughout the land have begun to respond to the call augurs well for the friends of higher commercial education in the United States. Though the curricula of our schools do not as yet attain to the position of those of France, Germany, and other European countries, a good beginning has been laid, so that it is reasonable to expect that ere long not much more will be left to hope for.

This preliminary introduction will serve as an approach to the topic of this chapter. Not many years ago, the problem of what was a proper training for the commercial teacher did not concern many educators or business men. Within the memory of most of us there was a time when it was a

matter of indifference whether the teacher of business subjects had the training afforded by institutions of high school grade, or not. His technical training consisted of a knowledge of bookkeeping, in scope no broader than that which nowadays is presented during the first year's high school work in the subject; a study of commercial arithmetic which emphasized foreign exchange and "short cuts"; and his education was rounded out with an ability, often painfully acquired, to swing a pen artistically. Some few added to their accomplishments a knowledge of stenography.

If the training which has thus been so briefly outlined sufficed for the teacher of a past decade, such is no longer the case. What preliminary education is expected of the man or woman who expects to enter the ranks? An intelligent answer requires a survey of the domain presided over by the commercial teacher.

The most superficial acquaintance with modern business education would suffice to indicate that a much broader knowledge is required at present than formerly. But this surface indication is not sufficiently exact for our purposes. So though our investigation demands a more scientific basis, the difficulty which apparently looms up is not as real as might be imagined, inasmuch as an insight into the curriculum of the commercial high school has been gained by a study of the subject-matter contained in the second chapter. It is our purpose now, in the light of what is expected of the student, to ascertain how the teacher may be best fitted successfully to accomplish the work he is called upon to perform.

Lest we take too narrow a view of our subject, it is well that we do not hasten to survey the field from its purely technical side alone. Too long, indeed, was it deemed sufficient that the student preparing for the teaching of business subjects

should acquire some familiarity with what might be termed "the three R's" of commerce — reckoning, 'riting, and recording. Without continuing this topic in the present connection, we wish to point out that our problem, in its entirety, must consider the fundamental training of the teacher in general, and then discuss what special training should be added by the person wishing to specialize in commercial work.

It is our purpose first to discuss the education of this teacher without direct reference to any specific field of pedagogic activity, as the books on education, whose number is legion, spare us the need of developing this topic in too great detail. It is no longer held that the teacher is born; all concede that he may be made. Psychology, pedagogy, and the science of class management have amply justified the contention of their friends regarding their efficacy to improve the raw material of normal classes, so as to produce good teachers for our schools. We know, then, that instruction aiming to develop teaching ability is practical and feasible. But instruction in how to teach — so most educators agree — should only be offered to those who have previously acquired the culture afforded by institutions of higher learning. No advanced community any longer sanctions less than a high school education as a prerequisite for the teaching profession; the tendency is toward an insistence upon a college education for persons who intend to teach in secondary schools. The members of a high school faculty should not have less than a college training, though for practical purposes it may be, and often is, necessary to lower the bars in order to secure instructors in certain technical subjects.

COLLEGE TRAINING

The question arises, Should the commercial teacher have an academic degree? And if so, what subjects should he choose during his college course? It is our firm conviction that the college graduate, as a general rule, makes a better pedagogue than the person who has not received the benefits of a so-called liberal education. Just why this should be so is not easy to state. It hardly suffices to assert that our experience justified the statement. Especially is this so in the light of what a very popular college president, in a recent address, defined culture to be, — that which was left to a college graduate after he had *forgotten* all that he had learned at his *alma mater*. Though this definition must not be accepted literally, it will serve our purposes for a moment. If, then, it is not the subjects of instruction in themselves which are of prime value, what is it that causes us to advocate a college education for all those who wish to enter the professional fold?

Probably the most important contributions of a college education are the powers of attacking a problem and the broader point of view. The ability to size up a situation or to solve the problems which confront us, though often the result of what has been called a "natural gift," is, by most of us, acquired only as a result of education and training. The liberal-minded man is most often the product of the college. And even in the realm of business it is easy to read the sign of the times which points unerringly to the need of higher commercial education. This spirit of the times demands of the man of affairs, as it has long of the minister, physician, and lawyer, a liberal college education, so as better to fit him to wrestle with the material things of this world.

We might be somewhat diffident about so strongly advocat-

ing that the prospective teacher devote three or four years of his life to further schooling were it not for the change in the colleges and universities which is often associated with the name of President Charles W. Eliot. The elective system, combined with the fact that economics has been so liberalized as to include courses in business administration, trade policies, advertising, railway rate making, factory efficiency, and other strictly practical commercial subjects, has removed the last argument of the so-called self-made man to the effect that the only way to learn a thing is to do it. Business men have come to realize that a proper combination of theory and practice spells greater efficiency than was possible under the apprenticeship system which prevailed until quite recently.

Now that educators have come to realize that no single subject of instruction enjoys a monopoly of mental discipline, and that the training value of a topic depends not so much upon itself as on the manner in which it is presented and its relationship to life work, a wonderful change has come upon the policy pursued by study-programme builders. No longer is it felt that the classics, mathematics, and moral philosophy should occupy the major part of the students' time; practical subjects, which in themselves are as much an intellectual discipline as was ever true of the older studies, and at the same time prepare for the life outside of the college campus, have come to be regarded as suitable diet for the student. It is because of this change in the college and university curricula, that we feel it so strongly incumbent upon us to advise the reader to seize the opportunity, if presented, to come within the influence of an institution which is dominated by modern educational ideals.

EXTENSION COURSES

But we realize that many of those to whom these pages will come have either no chance to attend a college, or else are now teaching, and cannot very well begin their preparation anew. To them, it is the Gospel of Hope, not of Despair, we wish to preach. Traditions have been shattered in this twentieth century of ours; all good roads lead to success. Our institutions of learning, catering to the needs of those who cannot devote all of their time to instruction, have begun to offer evening courses and summer school work, which practically parallel the regular day sessions. Yet even for those who cannot attend upon this work, the door of hope is not closed. Reliable correspondence schools have made available to the ambitious student much of that which formerly was for the elect alone.

Regular day session work is probably most fruitful of results. This is true for a number of reasons, of which the most important are that most students who attend these classes have greater leisure than the other groups, and that they pursue their studies at a period during the day when their minds are freshest. Class instruction, whether in winter or summer or during the day or evening, is more desirable than correspondence instruction because of the emulation which is excited by the daily recitation. But correspondence schooling, when properly and conscientiously conducted, is, to the properly qualified ambitious worker, hardly less beneficial than any other kind. On this point, the remarks of the late President Harper of the University of Chicago are very apropos :

“I have myself been personally interested in correspondence work for twenty years, and I have seen the system worked for that period of time. In some respects there is opportunity for better work in correspondence

study than in ordinary class-room recitation. Each student in a correspondence course has to recite on all the lessons, while in many a class room the student recites on only about one-thirtieth of the work of a three months' course. It is safe to say that the standard of work done in correspondence courses is fully equal to that of the work done in the larger classes. Indeed, I may say that there is a larger proportion of high-grade work done by correspondence than in class recitation. People who take work by correspondence do it because they want to get something out of it, while in many courses in colleges, the students take the work merely because it is required in the curriculum."

A word of explanation is necessary regarding our attitude toward instruction by correspondence. We have met many persons who are discouraged because they have not had, or do not have, an opportunity to improve themselves by means of college or university work. We have just tried to show that for the truly ambitious opportunity knocks more than once — in fact, it keeps on knocking all the time. The invitation is for all the old and young, the beginner and the experienced teacher, man and woman, native and foreigner.

It is true that correspondence instruction in practical subjects is of value only where the student has opportunity to apply his theories to practical experience either in the laboratory, the shop, or the business. But then many of the students who take correspondence work, do so in order to help them organize their practical experience, in order to give them a broader outlook upon their work and a consequent opportunity to advance themselves in it. The instruction fulfils its purpose as far as those students are concerned. Correspondence work in business subjects is therefore valuable to learners, because the large majority of them are engaged in business, and have the opportunity, by practical use, to test what they have learned.

But we cannot leave the discussion without a parting word,

or else we may be misunderstood. Despite our approval of correspondence instruction, we must regard it as a substitute, not as an alternative, of regular university work. Every one who has time and means to pursue regular university courses should by all means do so. The dividends are bound to be ample and satisfactory.

SPECIALIZATION

Now that we are agreed that a college education is a desirable preliminary for the work of the teacher because, aside from all other benefits, it actually prepares him for his life work, another question remains. What special training will best fit the commercial teacher for his professional duties? It has already been seen that an examination of the high school curriculum, with which a study of Chapter II acquainted us, would probably furnish a reliable index.

In thus speaking of the curriculum in Chapter II, we must guard against falling into a natural error. We are not justified in jumping to the conclusion that a high school student who has pursued the work outlined for a commercial course is by virtue of such training best fitted for the task of teaching. Nor would such a person be much better able to cope with the problems of the schoolmaster, were he to add a normal course to his high school education. For it is to be remembered that whereas a good student of a certain subject may prove a successful coach for a less able classmate, it is quite a different task to formally present a topic to a class. The best preparation for the successful presentation is a thorough knowledge of subject-matter, and such an understanding can only be acquired by pursuing one's studies beyond the relatively narrow confines of the academy.

When dealing with the training of the commercial teacher,

we are treating of an instructor who must supplement whatever knowledge he has acquired at school or college, by actual experience gained in the real world of business. Thus, the person who essays to teach bookkeeping should have kept books, — the person who discusses railway rate making should, if possible, have helped to establish a tariff. But this is an ideal state which though aimed at is quite beyond attainment. Fortunately, any business experience so changes the academic attitude, that a healthy reaction to unpractical theory results from such contact, and it is found that the student body is much more impressed by the man who comes from business than with the profound cloister philosopher who theorizes on what real banking or real importing are, or ought to be.

The conclusion often drawn from such statements as those contained in the foregoing paragraph, serves to emphasize the need of a training in logic for many persons. Though business experience enriches academic instruction, it by no means follows that the man of business, — solely because of his experience, and without the acquirements which would be his were he to have pursued courses in business subjects, — makes the ideal teacher of commercial students. Every one familiar with school administration can present examples of brilliant artists who cannot teach the rudiments of drawing, of skilled mechanics who fail to succeed as instructors in manual training, of successful practical men who are all at sea in the changed environment of the class room.

We are now prepared to accept the conclusion that the training of the teacher is a much more complex process than at first sight appeared to be the case, while the situation is more complicated still when we deal with the teacher as a specialist. Soon we shall see that the analysis in so far as it

applies to the teacher of commercial branches offers greater difficulty than might be expected even in light of what obstacles were anticipated, because he is called upon to present such a variety of more or less unrelated groups of subjects. Still, before we proceed with the final division of this section, it is well to summarize our conclusion thus far. The ambitious student who aims at success as a teacher of business subjects should strive to acquire a college education which should include or be supplemented by courses in pedagogic and commercial subjects, and he should endeavor to secure some actual experience at keeping books, or as a real worker in some business, so as to secure an insight into affairs which in school, no matter how well it carries out the ideals of business education, he can ever hope fully to accomplish.

The time has now come to ascertain what special topics the reader should be prepared to handle. Necessarily the requirements will vary with different situations, but for our purposes we shall employ the model curriculum arranged for the commercial high school and shown in an early chapter. Obviously, the subjects included under science, languages, mathematics, and other such general groups, are not properly included as business topics, though necessarily included in the curriculum for purposes which have been made clear elsewhere. An ability to teach other subjects than those primarily his own will enhance the value of the instructor to any institute, but as a man or woman is usually engaged because of his or her ability as a specialist, we shall devote our attention solely to those which constitute commercial or business subjects. In passing, however, it may be said that the person who has had the benefits of a liberal education, and who understands methodology, can, in an emergency, handle with reasonable success almost any subject the prin-

ciples of which have been definitely formulated in a textbook.

The first group of subjects in the curriculum may be styled the *technical* group. Of the subjects in this group, accounting is the most important. Besides bookkeeping, it includes penmanship, commercial arithmetic, business forms, and business practice. The second group may be termed economics or the science of commerce. It consists of commercial geography, the history of commerce, and economics. To these subjects may be added commercial law.

One who wishes to qualify to teach stenography must become proficient not only in subject-matter and methods of teaching, but must obtain thorough training in English composition and rhetoric, in business practice and usages, and in office systems and routine. Subjects of the economics group and commercial law should form a part of the teacher's training, although they are hardly necessary as a part of the qualifying examination for the position as teacher of stenography. The question may arise whether a teacher of the subject should be required to take a speed test, or whether it is sufficient for him merely to be thoroughly acquainted with the principles of the shorthand system. Our answer is that the teacher who wishes to drill students in speed must understand the practical problems that have to be overcome in the attainment of it. He can hardly be familiar with these if he has never conquered them himself. Besides, the schools are entitled to the services of experts in their craft. Too often has the charge been made that persons who are unfit to obtain a good position in the business world take to teaching commercial subjects.

Another prerequisite of all business teachers is penmanship. Good penmanship was long deemed a gift. Various systems

of full or modified muscular movement writing have demonstrated the fact that every one can easily and quickly secure the ability to execute fairly desirable copy. The prospective teacher must realize that it is almost, if not absolutely, impossible to secure a position unless the applicant is able to show himself a master of what is sometimes known as a good business hand.

This discussion would not be complete were we to neglect to indicate how a knowledge requisite for the task of the person undertaking to teach the subjects just indicated may be secured. Students in high schools or colleges which do not offer instruction in this work can secure it by attending summer sessions, or by correspondence work. To be able to do book-keeping properly, however, the prospective teacher must also study accounting, and, as was shown earlier, he must also secure some business experience. Every one must decide for himself how to do this; some may decide to do so in some of the ways already pointed out, or else by devoting another year or two to the period of preparation. He may supplement his business experience, if this is meagre, by observation work in business houses. The time is coming when every school board will permit teachers of commercial work to absent themselves, for a short time every year, for the purpose of studying concretely the ways in which business is conducted.

In conclusion, we must consider the complaint that the prospective financial rewards of teaching commercial branches hardly justify an elaborate period of preparation. It is true that the salaries paid are, as a rule, inadequate, but not to those who are in a position to command a salary proportional to their worth; and they are persons that have had a broad training. Not until the standard of preparation of the com-

mercial teacher is at least as high as that of the academic teacher will his standing equal and his salary surpass that of the other. In order to expect the community to value his services properly, the commercial teacher must impress it with his worth by an adequate preparation and special equipment for his profession.

SUMMARY

The success of commercial education in the secondary and high schools depends upon a supply of well-trained teachers. The old-time teacher of business subjects had little more than a knowledge of elementary bookkeeping and arithmetic, a smattering of stenography, and the ability to write artistically.

The well-equipped teacher of to-day should have a broad general culture equivalent to a college education, and a grounding in pedagogy. If he has not had this culture, and resident courses are not available, he should try to obtain it through the correspondence schools.

The specialized training of the prospective teachers in addition to pedagogic study, should be in connection with an intensive study of groups of commercial subjects. The first group is the technical group, including accounting and arithmetic; the second is the economic group, including commercial geography, history, the technique of commerce, law, and economics. The third group includes stenography, type-writing, and English.

Every teacher should have had some practice work in business, and this experience should be supplemented, even when he is already engaged in teaching, by observation work in business.

EXERCISES

GROUP ONE

1. Discuss the progress made in the training of the teacher of commercial subjects.
2. Why should the teacher of bookkeeping have some actual business experience?
3. Should a commercial teacher pursue an academic course at college? Give reasons.
4. Summarize the views of modern educators regarding the value of correspondence instruction.
5. Criticise the statement, "the practical accountant makes the best teacher of bookkeeping."
6. In what subjects of the ordinary college course should the prospective teacher of commercial subjects specialize? Why?

GROUP TWO

1. Plan a summer course in reading for a teacher of business subjects, who has not had a college education.
2. Prepare a normal course in bookkeeping and accounting suitable for teachers.
3. Outline an address of inspiration to be delivered to a convention of commercial teachers, most of whom have had no academic training beyond the high school.

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CHAPTER XVI

RELATION OF THE SECONDARY SCHOOL TO THE HIGHER SCHOOL OF COMMERCE AND TO THE BUSINESS COMMUNITY

THE SECONDARY SCHOOL AND THE HIGHER SCHOOL OF COMMERCE

THE topics to be considered in this chapter are very important for the secondary school student and graduate, because they involve a question of the articulation of his work in the school with his work after graduation. In order to answer some of the questions that may arise on this point, we must define once more the vocational aim of the secondary school of commerce.

Sufficient has been said on this subject to indicate that the aim of the high school is not vocational in the special sense of the word, but prevocational. To illustrate the distinction between the two, we may compare the technical high school with the trade or engineering school. The latter is designed to train the specialist in a particular line of activity; the former aims to give the student an acquaintance with several lines of technical activity, to aid him in determining his choice of a specialty which he is to pursue after graduation, and to give him that training which will enable him very materially to reduce the period of apprenticeship in whatever line of industry he enters.

Our secondary commercial school occupies a position analogous to that of the technical high school. With the excep-

tion of the work in stenography and typewriting, it scarcely may be said to prepare directly for a vocation. It is true that graduates are prepared to take positions as bookkeepers, but the school does not bring them to the goal of the bookkeeper's ambition: the profession of certified public accountancy. It does, however, give them the general culture, the ability to take advantage of their opportunities in business, to observe and to interpret, to pursue self-culture toward the attainment of this goal by the combination of experience and self-instruction. The higher lines of technical commercial activity are practically closed to the person who has had no more than a common school education; although in exceptional instances, we find persons of native energy, intelligence, and will who have mastered the greatest technical difficulties by self-study or by correspondence instruction.

We must repeat, then, that while the graduate of the secondary school may be disappointed by having to begin almost on the same level as the one who has had no such education, he will outstrip his rival in a short while, and will attain a position to which, without such education, he never could have aspired. But the high school graduate need not be too vain of what he has accomplished, and imagine that his education is complete. If there is one thing that a cultured man realizes, it is the necessity of pursuing the search for knowledge right through life. The high school graduate should therefore have developed in his course that thirst for knowledge which would urge him to satisfy it; and his experience in business will lead him to see how much he needs to supplement his knowledge in order to advance himself to the higher stages of his vocation. He will look about him for an opportunity for further study, and if he lives in that community in which are given higher courses of instruction in

commerce, he will be very fortunate indeed. If this opportunity does not exist, he will take advantage of the instruction offered by the better class of correspondence schools.

The curriculum of the university school of commerce is determined both by the needs of the business community and by the degree of previous training which it presupposes. Its aim is distinctly practical or vocational. In the secondary school, the attempt to give specialized courses in real estate, insurance, or salesmanship must end in failure. The inclusion of such courses, even as electives, looks well in a curriculum, but on what basis can the student determine his election? In exceptional cases a pupil may have his mind focused on a definite real estate or insurance office in which a position is waiting for him after graduation. But the secondary school cannot afford to give courses for those few, and even if it could, the work would be of very little value, because it could not be correlated with practical experience. It is, however, a very good thing to be able, in a general course, like applied economics or technique of commerce, to present these special activities so as to give the student an outlook upon various business activities in order to suggest problems to him, and in order to determine his choice of a particular phase of business activity. In most cases, the student's choice of a particular line of business will be determined by accidental circumstances. If he obtains a position in a bank, then he will feel that, if he expects to make banking his life work, he must know the work from all sides. Here comes the greatest function of the university school of commerce: in offering courses to students who are already engaged in business, who feel the inadequacy of their present knowledge, who realize the problems that exist, and who can find instruction that will not only satisfy their need in their present position, but prepare them

for the highest achievement in their line of work. The work is only another illustration of human experience, that when theory and practice go together, the results are most successful.

There are certain high school graduates, however, who intend to enter a university school in order to devote all their time to post-graduate study. The university satisfies the needs of these students as well, by offering a systematic course leading to a degree. But even such students should, in some way or other, spend a part of their time in actual business. What would we think of the physician who receives his degree to practice medicine without having done any clinical work? It is therefore a peculiar situation to find a person graduating as a specialist in a certain business without any business experience whatever. Most of the students in higher schools of commerce either are engaged in business and devoting a part of their time to study, or they have had business experience and are taking a year or two off, to do some studying which will fit them for higher lines of work.

The university also serves the need of business men who are not able to devote a large portion of their time to study, but who are interested in certain special lines of work that correlate with their business activities. These men are certainly made better for the supplementary training they are receiving. And finally, the higher school is of the greatest value to the commercial teacher, as we indicated in Chapter XV.

THE RELATION OF THE HIGH SCHOOL TO THE BUSINESS COMMUNITY

After all that is said about the commercial high school, the only prevocational function which still devolves upon it is to bring the school in closer touch with the business community. There are at least two reasons for this: First, it must make the

theoretic work in the school concrete and applicable to real business conditions; secondly, it must make it easier for the graduate to adapt himself to his vocational surroundings, with the least possible waste of effort. The prevocational technical school has partly solved the problem by bringing the machine shop and some of the equipment of industrial life into the school. To a limited extent this may also be done in the commercial school. It is possible, for example, to have the standard office equipment, filing systems, calculating machines, mimeographs, and other duplicating machines, etc., as a part of the equipment of the school. The student may thus become acquainted with office appliances, — an acquaintance which will stand him in good stead.

But an equipment is not a business, and making use of the equipment is not the same as doing business. Shall we have a model office, a miniature store or bank, or some other form of business? Experiments along this line have not been successful, because they do not impress the student sufficiently with the reality of the work; they are mere play. By arousing the imagination, we can, of course, give a certain appearance of reality to the work. In bookkeeping, the good teacher can impress the student with a reality of the business, the transactions of which he is recording, by making him take an interest in the particular customers with which the firm is dealing, with the margin of profit on which the business is working, with the progress which the business has made, and with possible suggestions for improvement that might have to be made. Successful work along the lines of stimulating the imagination of the students presupposes very good teaching, very good business material, and exercises that have an air of verisimilitude about them.

There is another way in which the business may be brought

into the school, although it is not the most substantial way. We refer to addresses or courses of lectures given by representative members of the business community to the members of the school. A lecture, it is true, is hardly the best pedagogical method of impressing the student with knowledge. But these lectures have a great importance, nevertheless; first, they introduce the students to successful types of business men, and thus give them a certain amount of encouragement. Secondly, they make the students feel that the business community is taking an interest in them, and is ready to help them if they show themselves worthy of help. Thirdly, they are very important in connection with vocational guidance.

It is true that the students in commercial schools have decided their vocation to be a business career. But business to-day is highly specialized, and even though a student may have decided to enter commercial life, the question still remains, in what direction he should specialize. These lectures give a certain bent therefore to the student's post-graduate activity. We may say, then, that even if the information obtained from the lectures is not permanent, the inspiration given and enthusiasm aroused are abiding, and they therefore accomplish their purpose. The New York Chamber of Commerce has recently organized a series of lectures by business men to the students of the commercial high schools of New York. It is very encouraging for the future to find that the most representative organization of business men in the city has realized the duty that devolves upon it to co-operate with the educational authorities of the city to an end that will serve to the benefit of the community at large.

Systematic work undertaken by organized effort is far more effective than the desultory work which marks pre-

vious effort along this line, and the chamber of commerce or board of trade in every community should imitate the example of the New York commercial body, and take initiative in the matter of closer coöperation between the school and the business community. But to insure the success of the system of lectures, they should be organized into courses, students should be encouraged to ask questions, supplementary work on the basis of the lectures should be given by the teachers to their classes, and the students should be examined on the substance of the lectures. The courses of lectures should therefore be regarded as a part of the required work of the school.

If there are limited opportunities for business to come to the school, the only other way to increase the measure of coöperation with the commercial community is for the school to go into the business. In a very small way this can always be done with a selected number of students by taking them for observation trips to various industrial and business houses. The ways and means for effective work in this direction were suggested in the chapters on the technique of commerce and commercial geography, and emphasis was laid there upon the fact that in order to make these visits of educational value, the students must be prepared to know what to look for, and they must be required to report upon and discuss the results of their observations.

A practical way of bringing business and school together is being worked out by the educational authorities of New York. The plan is to bring the school into the business place, to send teachers to some of the large department stores and organize classes there for the purpose of instructing the students to a better understanding of their duties in the establishments in which they are working, and to supply such deficiencies in the elementary education of the workers as

are a hindrance to their progress. Before the public authorities decided to undertake this work, there had already been in existence classes of this sort in the Wanamaker stores and elsewhere. The establishment of this plan on a larger scale is another realization of the duty which the community owes to those who have been compelled to go to work before their elementary education was complete.

But this experiment bears only indirectly upon our particular problem in this chapter, namely, how to bring the secondary commercial school in closer coöperation with the business community. The continuation classes started in the mercantile establishments are, after all, only subordinate to the practical work which the pupils are doing in the business. We are looking at the subject from the standpoint of its feasibility, with the educational view primary and the practical or vocational part secondary. It is true that we may provide higher evening instruction for the graduates of our secondary school; and the commercial college which is to be established in New York under the supervision of the Chamber of Commerce will supply this need in a large measure. Evening instruction is, however, a drain on the worker who has been using up his nervous energy all day. The best hours for mental effort are in the morning or in the late afternoon, and the problem to work out is how to secure the coöperation of the business community so as to enable the workers to devote some of the hours which are most productive for mental activity to post-graduate study that will be most helpful to them in their line of work. The College of Commerce will undoubtedly work out a plan of part-time pursuit of a gainful occupation and part-time instruction in correlation with it — and at such hours as are most productive of good. But this will still leave unsettled the question, whether

we cannot have some practical business training for the student of the secondary school while he is studying.

Is it desirable, we may ask, assuming that the practical difficulties can be eliminated, to combine instruction with employment in business during the secondary school period? Probably not during the first two years of the course. The student is not sufficiently prepared, at the age of fourteen, to do effective work in business, and he needs to devote all his time to his school work. But in the third and fourth years some attempt at a combined system should be made.

In order to have a definite line along which we can inaugurate a particular system of coördination between the business and the school, we must study what has been done along these lines in the industrial world. There are two systems that have been installed in different communities, the coöperative system and the continuation system. In the first system the manufacturer agrees with the school system to give a systematic apprentice course in the trade, while the school agrees to give special theoretical instruction that is directly connected with the technical work. In some cases, the school alternates with the shop, taking the students one week and sending them to the shop the other. The next week students in the shop come back to school for instruction, while those who have been in the school go to the shop. The work in theory and practice is carefully coördinated, so that one helps and supplements the other.

The coöperative plan has been a great success in Fitchburg. It has been found that the average boy can do nearly as much school work as that required in the four-years high school course, by means of half-time work in school and half-time in the shop. The superintendent of one of the large industries of Fitchburg says of the value of this course: "On their

graduation we find that the high school boys are practically of the same intelligence, so far as shop work goes, possibly not quite as keen in touch as the ambitious boy who serves his time on the old plan, but they have a mental equipment from their study in the schools that would give them in a few months' time in the shops the same touch with the addition of the school training. They are more manly and have wider vision, and we prefer them to the boys who are taught the trade without the school experience."¹

The coöperative scheme of instruction with its close coördination between school and shop, such as is found in Fitchburg, is hardly applicable to business. Commercial work is scarcely of the same specialized character as shop work, and only coördination of a general kind is required. It would be a highly interesting experiment, however, to try the plan of letting pupils in the third and fourth year of the high school devote one week to instruction and one week to business. It is true that this plan might necessitate a fifth year of school. But what of it? The gain would much more than compensate for the loss. And not more than an additional year to the regular course would be needed, because the long vacations would be utilized as a regular part of the course. The objection that there might be a loss of continuity in the work is not borne out by the experience of those cities in which the coöperative industrial plan has been tried. As a matter of fact, the students would return from business to the school with a refreshed mind and with a new enthusiasm.

Under the part-time continuation plan, the employee is left free to engage in school work for a part of every day or one or more days a week. This system is particularly applicable to persons who are already engaged in business, and

¹ *New York Times Annalist*, March 23, 1914.

who wish to obtain a sounder theoretic foundation for their practical work. The coöperative system, on the other hand, is chiefly applicable to persons with whom study is the major pursuit, and practice is supplementary. Applying the part-time continuation system to the secondary commercial school would involve sending third and fourth year pupils for a part of a day, or preferably for one or two days a week, to the place of business. Of course it may be argued that no employer would be willing to break up the routine of his business in order to give opportunity to some outsider to get some practical experience. In other words, it may be contended that an employer would get no use from such an arrangement. In considering this, it must be remembered that the purpose of sending pupils of the school to commercial establishments would be not so much to give them a chance to earn a part of their way, but to give them some contact with real business. Even if they do not receive any compensation, they would still gain a great deal from one day's work a week, outside of school. Of course the better plan would be to have the alternating system of one week of business and one week of school, as outlined in the preceding paragraph, because such a scheme would give a certain amount of continuous, instead of mere fragmentary, experience. In this alternating scheme, too, the work of the pupil would be distinctly worth while to the business man, and it would be fair for him to pay some wages.

The success of the coöperative plan of instruction is dependent, to a large extent, upon the coördination of the work in business with the work in school. We have said that the close coördination found in industry is hardly possible in business, because the office or business house does not at any one time reveal all the different phases of the business

from the simplest to the most complex, as does the shop, in which all the different stages in the evolution of a product may be revealed to the apprentice. But the mere fact that the student is in business, keeping his eyes open and seeing the realities of the things that are discussed in theory in school, is a great means of education, even though the work to which the student apprentice would be sent would probably be of a humble character, such as office-boy work. But it must be remarked that without preparation by the school for the work that the student is going to do the succeeding week in business, the practice work will be almost fruitless. How much does the office boy, for example, observe of what is going on in the business, outside the narrow scope of his activity? The student should have suggestive problems for observation put to him. He must be made to feel that he must get the answers to those problems by his observation during his practice week. He must feel that the work he is doing in business is an essential part of the work required for graduation from high school. If progress reports of his efficiency in the practical work are made, and if the payment of wages is made conditioned upon efficient work, the student will have the best incentives to do his utmost; and the results will be profitable to the business and to the pupil, and highly satisfactory to his teacher.

Many details connected with the working out of an efficient scheme of coöperation require special coördinators, such as are found in Fitchburg: persons who understand both the needs of the school and the needs of the business community; persons who will take charge of the placing of pupils in the business houses for practice work, who will see that the employer treats them fairly, and who will follow and check up their progress. In a large school system it may be necessary

to have coördinators for specialized lines of industry, to secure the best results. Thus, there would be a coördinator for the banking, insurance, and other financial concerns; a coördinator for the merchandising and salesmanship business, another one for accounting, etc. It would also be the duty of the coördinator to articulate the work of one student apprentice with the one who succeeds him. As we noted above, the alternating scheme of coöperation requires the pupil to spend one week in school and another one in the business house. When he returns to school the next week, his place is taken by a fellow pupil, who was in school during the week that the other one was doing practice work. To insure the continuity of the work in the business house, so as to make it possible for the employer to respond to suggestions for coöperation, it would be necessary for the two apprentices, — the one who is leaving and the one who is taking his place, — to meet each other to confer about work for the ensuing week. This meeting, under the direction of the coördinator, could take place on Saturdays.

In the alternating scheme a pupil would not necessarily do all his practice work in the same business throughout the year. It would be preferable for him to have experience in several lines of business activity. In this way his vocational bent would be determined, and prospective employers would have great opportunities to discover possible talents and aptitudes of apprentices. This opportunity, which coöperation gives to pupils "to find themselves," is one of the most valuable features of the plan. Any complete scheme of compulsory coöperative or continuation instruction that is at all systematic may involve legislation, the constitutionality of which might be in doubt. The success of the plan must be looked for in the direction of voluntary coöperation between

the school and the business community and in the public spirit or enlightened selfishness of the business man. It is hoped that the chambers of commerce, working in conjunction with the school authorities, will develop a feasible and efficient plan of coöperation.

An opportunity for coöperation that should be made use of is the assignment of pupils, under supervision, to do some of the business work connected with the school, and even with some of the departments of the city government. In several western communities such a plan has been adopted. One thing that can be done is to make use of the large opportunities which the city as an employer can offer for observation and practice work by students of the commercial high schools.

But there are several additional elements, outside of those already considered, which will aid very materially in the success of the plan. Some of these are as follows:

1. Visits by teachers to business houses. If the school is to keep alive to the needs of business, the teachers must keep up with the times. Modern business is growing so rapidly in its methods that it does not take many years before a book on a business subject becomes out of date. Even granting a basis of business experience on the part of the commercial teacher, it is still possible that he will get out of date, unless in some way he keeps in touch with changing conditions in business; this he can only partially do through reading the latest books and magazines which deal with business problems. Every teacher ought to make it his object to spend several days of the year in the active observation of how practical business is conducted; and school boards ought to furnish all the facilities to teachers in the way of leave of absence, in order to enable them to do so.

2. Teachers' and Business Men's Clubs. Organizations

ought to be formed, consisting of business men and teachers, for the discussion of problems arising in connection with co-operation between the school and the business community. Such clubs will be of benefit to the business man in broadening his point of view, by showing him the educational problems involved, and by giving him an opportunity to impress his practical views upon those immediately in charge of educational administration and instruction. The clubs will be of benefit to the teachers in making them more responsive to the needs of the community, in broadening their outlook, and in making the results of their teaching more effective, by the larger opportunities which they will obtain for their pupils in practical training.

An important result of coöperation will be to make the business man value more highly the needs of a sound theoretical foundation, and to insure in the long run a generation of more efficiently trained men. If the business man gives practical recognition to the work of the school by honoring the certificate of pupils who have been trained under the coöperative plan, the success of it will be more assured.

In conclusion, it will be perfectly evident to our readers, that just as in the past few years the greatest advance in commercial education has been in the direction of the establishment of university departments of commerce as well as high schools of commerce, so the great advance of the next few years will be in the line of development of the coöperative plan of instruction.

SUMMARY

The graduate of the secondary school of commerce is not a specialist in commerce, but he has a business culture which will enable him to reduce very materially his period of ap-

prenticeship. The function of the higher school of commerce is (1) to give the high school graduates who have entered business the opportunity to specialize in subjects in correlation with his practical work. (2) To give them an opportunity to devote the main part of their time to post-graduate study. But practice work in business should be a required part of post-graduate study. (3) To give special courses to business men. (4) To give the commercial teacher supplementary work.

It is the duty of the school to come in closer touch with the business community in order to correlate theory with practice and to make it easier for the graduate to adapt himself to his vocational surrounding with the least possible waste of effort.

The ways of bringing the business into the school are by the use of standard equipment, model offices, and miniature stores, and addresses or courses of lectures. The ways of bringing the school into the business are by organized observation trips to business houses, by continuation classes in business places and department stores, by part-time instruction in the day or evening schools along the line of the student's vocation.

Employment of high school students in business as a means of combining theory with practice is not feasible in the first two years of the course. Coöperative plans of instruction have been adopted in lines of industry in a few cities. The alternating plans of Cincinnati and Fitchburg, by which students spend one week in school and one week in the industry, have been very successful. The system may be applied to commerce also, but without the close articulation possible in industry. Part-time coöperative plans are not so good as alternating plans. The success of all coöperative plans requires teachers who will keep in touch with the community

through visits to business houses and through clubs; coördinators who will correlate the theoretical and the practical work of student apprentices, and the public spirit and enlightened selfishness of the business community.

EXERCISES

GROUP ONE

1. What is meant by the vocational aim of the secondary school of commerce?
2. Distinguish between vocational and prevocational training.
3. Justify the spending of four years in a commercial high school by a boy who will have to begin his business career at the "foot of the ladder."
4. How can the high school serve the business community, and how can business and industry aid the high school?
5. Discuss the value of a "model office" as part of the equipment of a secondary school of commerce.
6. Describe what steps the Chamber of Commerce of your community could take to encourage business education.
7. Describe the Fitchburg plan of coördinating the work of high school with that of the shop.
8. How does the Cincinnati plan differ from the Fitchburg plan?

GROUP TWO

1. Outline a plan of coöperation between a commercial high school and practical office work.
2. Arrange a programme of suitable subjects for a series of addresses to be given by the leading business men of your community to the students of the commercial high school.
3. Outline a set of instructions for a group of high school seniors who have obtained permission to inspect the office equipment and organization of a local concern.
4. Prepare a circular letter to the business men of your community, calling attention to the business training offered by your high school, inviting inspection, suggestion, and coöperation, and offering to supply their needs for well-trained office help.

5. Assume that six business houses in your community were willing to permit twelve of your students to assist them afternoons and Saturdays. Arrange a scheme for proper correlation, and explain how you would utilize this number so as to prove of greatest advantage to the business men, to the individual pupils, and to the entire class.

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